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THE UNITED SERVICE

A MONTHLY REVIEW OF

MILITARY AND NAVAL AFFAIRS

FOUNDED 1879

THIRD SERIES.

VOL. V.—APRIL, 1904.—NO. 4.

CONTENTS

		Page.
I.	Marriage in the Prussian Army. Translated from the German by Captain WALDO E. AYER, Thirteenth Infantry, U. S. Army	389
II.	The Puritan Militia. By CHARLES EDWARD BANKS, M. D.	403
III.	A Cruise on the Constitution. By BENJAMIN F. STEVENS	414
IV.	The Opening of the War. By "Active List."	433
V.	Our Torpedo Flotilla. By Lieutenant EDWARD L. BEACH, U. S. Navy	443
VI.	Our Contemporaries. By JOHN P. WISSER, Major U. S. A.	483
VII.	Editorial Notes	597
VIII.	Service Salad and Book Notices	607
IX.	Commander CHARLES E. COLAHAN, U. S. Navy	616

PUBLISHED MONTHLY BY

L. R. HAMERSLY, JR.,

156 FIFTH AVE., NEW YORK.

B. F. STEVENS & BROWN - - - - 4 TRAFALGAR SQUARE, LONDON, ENGLAND.

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THE LATE COMMANDER CHARLES E. COLAHAN, U. S. NAVY.

THE

UNITED SERVICE

EDITED BY L. R. HAMERSLY, Jr.

APRIL, 1904.

REGULATIONS CONCERNING MARRIAGE OF MILITARY PERSONS OF THE PRUSSIAN ARMY AND OF THE PRUSSIAN GENDARMERY.

[TRANSLATED FROM THE GERMAN BY CAPTAIN WALDO E. AYER, THIRTIETH INFANTRY.]

(Marriage Order.)

PURSUANT to a report which I hold I hereby approve the following order concerning marriage of military persons of the Prussian army and Prussian gendarmery, cancelling all former regulations. At the same time I authorize the war ministry to give explanations and to undertake changes of a kind not fundamental, particularly with reference to the prerequisites under which the proved income is accepted as sure or assured; and, touching the rank and file, cases in which the reserved permission to marry or the assent to dispose of the marriage portion have not to be forwarded to me.

Castle Urville, May 25, 1902. WILLIAM,
By Goszler.

To the War Ministry.

TABLE OF CONTENTS.

A. MARRIAGE PERMISSION.

I. Officers and Sanitary Officers..... 7
II. Non-commissioned Officers and Privates.....10
III. Military Civil Officials.....13
IV. General Regulations—Procedure after Authority is granted; Security of Private Income.....15

B. INCOME PROOF FOR OFFICERS.

I. Security of Income.....17
II. Directions for the Income Proof.....19
III. Consent of Military Boards for Disposal of Marriage Portion 21

APPENDICES.

Blank for Permission to Marry.....25
Blank for Entry of a Book-debt.....27

A. MARRIAGE PERMISSION.

I. OFFICERS AND SANITARY OFFICERS.

1. Officers and sanitary officers of the peace establishment, as well as the officers and sanitary officers used in those places of the army provided for in the budget, require for marriage the permission of His Majesty the Emperor and King.

A like permission require those states placed in the army for temporary service; the separate states which belong to but have not been taken into the Prussian union.

2. Permission to marry is therefore not required by:

(*a*) Princely persons who are chiefs of troop sub-divisions or who stand in the suite of such but who are not to be regarded as officers of the peace establishment;

(*b*) Officers in the suite of the army so far as they are not in the military budget places;

(*c*) Those sanitary officers in the suite of the sanitary corps who do not belong to the active service;

(*d*) Officers and sanitary officers who have withdrawn from active service;

(*e*) Those available officers and sanitary officers not used in the budget places of the army.

The above mentioned officers and sanitary officers do not require permission to marry even when they are temporarily called or admitted into the service.

3. Permission to marry for an officer or sanitary officer with a less salary than that of a captain (riding master) of the first salary class need be sought only when proof has first been introduced that the officer or sanitary officer has a private income which at least must amount to:

For a captain (riding master), cavalry captain, of the second salary class,* or for a district officer of the gendarmery with a salary of 4,500 marks; yearly, 1,500 marks.

For a district officer of the gendarmery with a salary of 3,300 marks; yearly, 2,100 marks.

For a first lieutenant and lieutenant, including corporal and private of the mounted Field Rifle Corps (Feld Jäger Korps); yearly, 750 marks.

For an ordnance, artillery or engineer captain of the second salary class; yearly, 1,000 marks.

For a staff surgeon of the second salary class, a first and an assistant surgeon; yearly, 750 marks.

Permission to marry for an officer available for use in a budget place of the army, whose pension amounts to less than 3,000 marks yearly need only then be sought when first there is proved a private income such that it and the pension together at least reaches the designated amount yearly.

This regulation is applicable to the sanitary officers used in the budget places of the army with this limitation, that the pension must either amount to 2,000 marks or must be raised to this point by private income.

For the members of ruling houses the requirements concerning presentation of an income-proof have no application.

Officers of hospitals are relieved from presenting an income-proof. In place of it there is presented in the case of the officers of the designated grade of captain downward the proof that there stands at the disposal of the officer the necessary means to found and maintain a home in the hospital.

Application for permission to marry, in so far as this does not have to be laid before the supreme head, will be handed in with the monthly lists of requests. With reference to the requests to marry coming from the adjutants of the royal (Königlichen) princes, and of the German princes (Fürsten), and from other officers in similar places, it is assumed that these applications are submitted to his Majesty, the Emperor and King, by authority of the prince in question.

To the application list are to be added:

(*a*) The application of the petitioner to the commander of the regiment, of the separate battalion, etc., or chief (director, etc.,) of

*Captains and riding masters (cavalry captains) who have not entered upon the salary of their grade must prove a private yearly income of 2,500 marks.

a service board. The application must contain: Calling and family name of the bride; the standing (social), exactly stated, of her father; whether the bride is a widow or divorcée; the standing of the deceased or divorced husband; and if an income-proof is attached, the explanations required hereafter, sections 23 to 25.

(*b*) The income-proof, if such is required by section 3.

(*c*) When it is a case of marriage with a divorcée, the decree of divorce together with the grounds. Should the groom be divorced, the time when the separation became legal is to be given.

The application lists themselves must contain exact information on the origin, training, education and calling of the bride, together with a conscientious and careful verification by the commander of all the circumstances coming into consideration and an explanation showing that neither service nor social considerations are in opposition to the proposed marriage.

There must be added further:

(*a*) In cases of captains and cavalry captains, as well as staff surgeons to whose applications no income-proof is appended, whether or not they are in the first salary class.

(*b*) In cases of lieutenants, the age (number of years).

(*c*) In cases of officers from the designated grade of major down, and in cases of sanitary officers from the designated grade of surgeon (oberstabsarzt) down, the amount of the pension at the time of handing in the application.

5. The applications of sanitary officers for permission to marry are forwarded through the channel of military surgeons to the general staff surgeon of the army and by him submitted to the supreme head.

The sanitary officer must report to his military superior of the line that he has forwarded his application in order to give him the opportunity to bring any doubts concerning the proposed union to the attention of the applicant's superiors in the Sanitary Corps.

II. SUB-OFFICERS AND PRIVATES.

6. Sub-officers and privates of the peace establishment must seek through military channels permission to marry.*

*Recruits and volunteers at their homes and not yet in active service require for marriage the authority of the district commander (Military Laws of the Empire §60$_4$, and Defence order §§80$_8$ and 85$_5$). Moreover the persons withdrawn from active service are not subjected to limitations in the matter of matrimony (Mil. Law of the Empire §61 and Defence order §111$_1$).

7. Authority to give permission to marry (see appendix 1) in so far as special statements are not met with, is assigned to the regimental commander or to that superior to whom disciplinary authority in the applicant's case has been conferred.

In particular, authority is conferred upon:

(*a*) For ordnance sergeant-majors, laboratory sergeants and pyrotechnists who are seeking advancement to the position of ordnance or pyrotechnical officer,*

The chief ordnance officer;

(*b*) For fortification inspectors who are seeking advancement to grade of fortification construction officer,

The inspector general of fortifications;

(*c*) For the other ordnance sergeants major‡ and fortification inspectors and for the ordnance sergeants,

The immediate superior of the rank of regimental or brigade commander—in the technical institutions, always from the inspector;

(*d*) For the laboratory sergeants and pyrotechnists who do not come under Class A,

The proper artillery depot director;

(*e*) For the sick in hospitals,

The governor or commandant of the hospital;

(*f*) For the gendarmery,

The Brigadier;

(*g*) For the assistant surgeons and the one-year volunteer surgeons,

The general staff surgeon of the Army;

(*h*) For the one-year volunteer military apothecaries,

The corps chief surgeon;

(*i*) For the military attendants of the sick,

The chief surgeon of hospitals.

8. Permission is not to be given if the marriage is opposed to service considerations or does injury to the position of a sub-officer,

---

*Consent for marriage is given to the pyrotechnical sub-personnel as a rule only after their advancement to grade of ordnance sgt. major; in exceptional cases of special ripeness of character and upon proof of settled behavior this consent may be given earlier, but only upon approval of the chief ordnance officer.

‡Ordnance sergeants major who seek further advancement may apply for permission to marry at the earliest after one year's service as ordnance sergeant major; others at the earliest after three years' service as ordnance sergeant majors.

in the cases of those sub-officers who are seeking advancement to position of ordnance, etc., officer, or is opposed to the future rank.

The examination of the application need not go to the extent of requiring the marriage ceremony to be performed in a particular denomination, nor may the grant of permission be made dependent upon the kind of a church wedding.

For the granting of permission there is the further condition that, in addition to the funds necessary for the preliminary matters, there must be on hand (in so far as no special regulations obtain) in the case of sub-officers a property of 300 marks; in the case of privates 150 marks if the bride is a native, 300 marks if she is a foreigner. This must be deposited in the troop money-chest in sure, interest-bearing securities or savings bank books.

The sub-officer or private must engage not to dispose of the principal of the deposited property without the approval of his superior. A partial or total expenditure of the marriage wealth can be made by a commander* in case of extraordinary need. See further A. IV., 15.

10a. Ordnance sergeants major, laboratory sergenats and pyrotechnists—the two last so far as they have attended the higher courses of the higher schools of pyrotechnics—as well as fortification inspectors who have not expressly (by a written statement) renounced later advancement to grade of ordnance, pyrotechnic or fortification-construction officer have to prove a private income of 1,000 marks annually.

(*b*) Assistant surgeons have to prove an annual private income of 750 marks. In special cases the inspector general of fortifications can moderate the amount required of fortification inspectors.

(*c*) Paymaster aspirants, and sub-veterinaries who do not expressly (written statement) renounce advancement to grades of paymaster and veterinary surgeon, must prove an annual private income of 750 marks.

Applicants for the commissary bureau service must also prove the same income.

Only in special cases, with approval of a general officer—in the case of applicants for the commissary bureau service, with approval of the war ministry—may departures herefrom be made.

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*Under this term "Commander" is to be understood the head of the administrative unit in question (Battalion, etc.).

III. MILITARY OFFICIALS.*

11. Military officials require for marriage the authority of their superiors. The applications are to be laid before the deciding authorities by the military channels. If the immediate superior of the official seeking authority to marry is not competent for the decision, he must in forwarding the petition, express any doubts he may have concerning the intended marriage or state that neither service nor social considerations are opposed.

12. Permission is given by

(*a*) The war minister

For superintendents, chief commissary councillor, councillors, assessors and referendaries with the military boards, the higher military law-councillors, and judges;

The war minister in union with the chaplain-in-chief

For the evangelical field-provost;

(*b*) The director of the general war department in the war ministry,

For the army-music-inspectors;

(*c*) The commanding general,

For the corps veterinary surgeons;

(*d*) The chief of the general staff of the army,

For the heads of bureaus in the office of the chief of the general staff;

(*e*) The chief judge advocate,

For the military court secretaries;

(*f*) The commander of a regiment or independent battalion, etc., or the head (director, etc.) of a military board,†

For chief paymasters, paymasters, chief veterinarians, veterinaries, regimental saddlers, carpenters, and ordnance masters;

(*g*) The inspector general of fortifications,

For fortification construction superintendents of higher and lower grades;

(*h*) The general staff surgeon of the army,

---

*Civil officials of the military administration require no authority to marry. They must, however, immediately render notice of such marriage to their superior authority. In the notice are to be given the name of wife, the names, residence and calling of her parents.

†The inspector of the military veterinary service grants the permission for the personnel of that service in the military veterinary schools, and the blacksmith apprentices.

For the corps staff-apothecaries and staff-apothecaries;

(*i*) The senior military court councillor or the military councillor of a court,

For the military beadles;

(*k*) The military intendant (superintendent),

For the secretaries and registration officials of the corps and division boards;

(*l*) The chief councillor of the board of military institutions,

For his subordinate secretaries and registration officials;

(*m*) The evangelical field provost of the army,

For the evangelical military chaplains;

(*n*) The military rector,

For the military sacristans under his charge.

13. Permission to marry is to be given to military board assessors and referendaries only when they prove that their incomes, through an assured supply added to their pensions, amount together to at least 4,500 marks. Employees of boards must prove before their marriage an addition to their service pay of 750 marks.

IV. GENERAL REGULATIONS.

14. If permission to marry is given, a certification of the fact is made for the petitioner to lay before the registrar.

In cases in which this authority is granted by the supreme authority this certificate is subscribed and sealed by the commander to whom the application is addressed (No. 4*a*); in other cases, by the superior who granted the permission.

Officers to whom permission to marry has been given directly by the supreme authority are permitted to submit to the registrar the supreme cabinet order itself, or an authenticated extract therefrom.

Further, those persons competent to grant permission to marry—in the cases of officers and sanitary officers, the regimental commanders and corresponding superiors; and in the cases of officials their immediate superiors—must communicate immediately to the proper military chaplain or to the proper civil clergyman entrusted with a chaplain's duties every case of granting this authority.

15. Touching the security of income and the income-proof, the following regulations given for officers under BI and II are authoritative for all military persons charged with carrying out such a proof.

For approval of the full or partial return of the marriage property or goods after compliance with the necessary prerequisites (concerning officers and sanitary officers see B III) are competent:

For military board, assessors, and referendaries,
The war ministry;
For other officials as well as sub-officers and privates,
The superior who is authorized to grant permission to marry.

B. INCOME-PROOF FOR OFFICERS.

I. SECURITY OF INCOME.

16. Revenue from city or country real estate, from coal mines, mines, manufactories, mercantile concerns, particularly dividends from stock companies, can be accepted as sure only when the real estate, etc., lies within the German Empire or the business undertaking in question has its seat there, and it can then be accepted to only one-half of the average annual revenue which has obtained during the last five years.

17. Income from mortgages, real estate and rent annuities are to be considered sure when they comply with the following requirements:

They must pertain to real estate within the German Empire and must stand within one-fifteenth, or, so far as no one else equals or precedes in right to enjoyment of the revenue, within one-twentieth of the net revenue after deduction of land tax as determined by the state; or, in case of country real estate, stand within the first two-thirds of its worth; in case of city real estate, within the first half of its value.

With country real estate the work is to be determined by appraisement of a public credit institution, composed of a union of real estate owners and possessed of legal authority by state grant, or by appraisement of a public provincial (communal) state institution for real estate credits, or by judicial appraisement; in the case of city real estate, in like manner or by appraisement of a public fire insurance company (state or communal).

Excluded are mortgages, real estate and rent annuities which are entered upon the possessions of parents, grand-parents, adopted or foster parents of the groom or bride.

Only five per cent. is accepted as an income likely to be sure, even if the rate of interest in the mortgage or ground rent is more.

18. Interest on bonds are deemed secure if they are promises of the Empire or a German state, or consist of such other German or non-German bonds as are approved or loaned on by the Reichesbank.

The fact of the bank's approval of the bond must be noted on the white deposit receipts of the Reichesbank when depositing the bonds with the bank. In addition it (the bank's approval) must be manifest in the income-proof.

19. The interest of a book account of the groom or bride in the Reichesbank, or in a bank of one of the German states as well as of Alsace Loraine constitutes a sure income.

20. Income from the property of a third person can be considered in the case of one submitting an income-proof only when its use has been ceded to the bride and groom, and for the contingency that the former should die when the use of the income must go to the widower as an aid in educating the children sprung from the union, so long as the officer is in active military service and has pay less than that of a captain (cavalry captain) of the first class, or is on duty in one of those places of the army reserved for officers and receives less than 3,000 marks yearly pension.

As sure income are the following:

(*a*) Interest and proceeds of mortgages, real estate and rent annuities which comply with the requirements (No. 17) after entry of the usufruct in the land register.

(*b*) Interest of sure bonds (No. 18) which, with the interest not yet due at the time of the projected marriage, together with a certificate of rights in subsequent interest payments, are deposited in the Reichesbank with the explanation that the usufruct thereof belongs to him who seeks the marriage permission (designating him by rank, name and regiment), or, in lieu of him, to his bride until the military board (No. 28) approves the revocation of the right of usufruct.

(*c*) Interest on a German book deposit (No. 19) in which the owner has had entered the usufruct and a limitation to the effect that the usufruct can be disposed of in any other way only upon written consent of the military board.

II. MANAGEMENT OF AN INCOME-PROOF.

21. In so far as the income consists of secure bonds deposited with the Reichesbank or of book deposits the submission of the deposit receipts issued by the Reichesbank, or an authenticated copy of the entry in the deposit book is sufficient.

22. In other cases the income-proof is to be executed by the officer before a judge or notary and the action there recorded to be submitted.

All information necessary to the proof, particularly relating to the securities, their interest and rights thereto, are to be laid before the judge or notary. They are to be entered separately in the proceedings. All the papers, viz., the mortgages, real estate and rent annuity certificates are to be immediately returned to the owner.

In the case of mortgages, real estate and rent annuities, the owner of the pledged real estate is to be designated in such a way that it may be clear that it is not a case for exclusion under No. 17, par. 4.

23. For proof of the property right of the groom or bride in the securities standing in his or her name even when they are deposited in the Reichesbank, the certificate of the officer upon honor and duty that the papers in question are the property of himself or bride is necessary and sufficient.

24. If the income is composed of interest or proceeds of secure mortgages, real estate and rent annuities arising from the property of a third person (No. 20 *a*) the officer must certify that he will not renounce his right of usufruct without the written consent of the military board so long as he is in active service and receives a lesser salary than that of a captain of the first salary class, or is in one of those places of the army reserved for officers receiving a yearly pension of less than 3,000 marks.

25. In addition there is required in all cases a statement of the officer, upon honor and duty, that he himself, and, according to his conviction, his bride have no debts.

Should there be debts the officer must show, in addition to certifying on honor and duty as to the correctness of the statement, that for their discharge none of the indicated income need be used. If the united debt is taken into consideration in the proceedings of the income-proof, as for instance the charges against the pieces of property mentioned in No. 16, the certificate of the officer upon honor and duty that he himself and, according to his conviction, his bride have no further indebtedness than that mentioned in the proceedings is sufficient.

26. The income-proofs are to be verified, even those presented by officers and sanitary officers of the war ministry and ordnance officers by an official of this board to be designated by the war ministry. In other cases the verification of the income-proof, even that to be presented by sanitary officers, rests upon that judicial military justice official to whose official department the staff or troop unit forwarding the request-list belongs.

The income-proofs are to be laid before the supreme authority only

when they comply with regulations and bear a pertinent short remark of the official who has performed the verification.

The income-proofs are returned to those officers to which the orders of the supreme cabinet are addressed and are handed over to the petitioners.

III. APPROVAL OF MILITARY BOARDS FOR DISPOSAL OF THE MARRIAGE PROPERTY.

27. Consent for surrendering the income set aside from the property of third persons (No. 20) must be given by the military board, as follows:

(*a*) For a first lieutenant who has entered upon the salary of a captain of the second salary class, only so far that there shall remain to the officer the prescribed private income of the new grade;

(*b*) For an officer (sanitary officer) who has entered upon the salary of a captain of the first salary class (cavalry captain, staff surgeon) or who has become separated from the service without being put on duty in one of the fixed budget places of the army reserved for officers (sanitary officers).

(*c*) For an officer (sanitary officer) utilized in one of the budget places of the army and who receives a higher pension, only so far that with the pension and private income together there shall remain to the officer 3,000 marks, to the sanitary officer 2,000 marks annually.

(*d*) If a mortgage is called in for repayment by the mortgagor, or a bond is redeemed, and in similar cases in which the capital must be returned to the proper owners, said capital required for repayment is to be replaced in some other way according to these regulations. The proof that this has been done is to be presented to the military board by the officer within a time fixed by the board.

28. For granting the approval reserved for the military board the following are competent:*

(*a*) The chief of the general staff of the army,
The chief of the mounted field rifle corps,
Commanding generals,
Inspector-generals,
The governments of Berlin and Ulm,
The superintendents of the riflemen (Jäger) and sharpshooters,
The superintendents of the infantry schools,
The superintendents of the field artillery,

*If herein the co-operation of a judicial military justice official is necessary, he is to be that official who has to verify the income-proof (No. 26).

The superintendents of the railway troops,
The chief of ordnance,
The chief of the gendarmery,
The commandant at Potsdam.

For all officers belonging to the districts commanded by these several service places, or which belonged to them at the date of their separation from active service.

(*b*) The war ministry,

For all other officers and for all sanitary officers.

APPENDIX 1 (No. 7).

To (rank, Christian and surname).....
of the (regiment, etc.) permission to marry (Christian and surname) .....daughter of..... (town and district, living or dead, Christian and surname) is hereby given.

Notice is hereby given to the competent chaplain or civil minister entrusted with spiritual matters of the soldiers.

The prescriptions noted on the back hereof are to be observed.

.....(place).....date.....
.....signature
Colonel and Commander
of the.....Regiment.

Marriage Authority
for
Name.....
Rank.....

1. Notice of the church wedding and the securement of the publication of the banns must be attended to by the competent chaplain in proper time. At this time both certificates of baptism, or certified copies thereof, are to be presented.

Competent is the military chaplain or the civil minister entrusted with spiritual matters of the soldiers in the military church-community to which the groom belongs.

2. In case another military or civil minister—even the pastor of the bride—should perform the wedding ceremony, at least fourteen days beforehand the certificate of authority to marry, which is furnished gratis, is to be obtained from the competent military or civil chaplain. Should for any special reason this certificate not be turned over, the competent chaplain must give instead of it a certificate to the effect that it has been applied for.

APPENDIX 2. (No. 20c.)

A.

The usufruct of.....(figures) marks, write.....(words) marks, an annual interest sum of.....marks, write..... marks, has been assigned to.....(rank, name, regiment) from the day of his marriage as an addition prescribed by regulations, and for as long a time as he is in active military service and receives a salary less than that of captain (cavalry captain, staff surgeon) of the first salary class, or is put on duty in one of the offices reserved for officers and receives a yearly pension of less than 3,000 marks (with sanitary officers 2,000 marks). During this time the recorded claim to or the right to the usufruct of.....marks in the name of .....(rank, name) can be dissolved wholly or in part only upon the written approval of the competent military board.

B.

The usufruct of.....marks, write.....marks, a yearly interest sum of.....marks, write.....marks has been assigned to.....(name and address of bride), who is about to marry..... (rank, name, regiment of the officer or sanitary officer), as an addition prescribed by regulations, and until the time when the before mentioned officer (sanitary officer) leaves the service or is no longer required to furnish proof of a private income. Should.....(name and address of bride) die within the designated period the right of usufruct passes to the before mentioned officer (sanitary officer) that the income thereof may be utilized as an aid in the education of the children sprung from the union.

So long as.....(rank, name) is in active service and receives a less pay than that of captain (cavalry captain, staff surgeon) of the first salary class or is assigned to duty in one of those places in the army reserved for officers and receives a yearly pension of less than 3,000 marks (with sanitary officers, 2,000 marks), the recorded claim to, or right to the usufruct of.....marks assigned to..... (name of bride) or the subsequently married (rank and name of officer or sanitary officer) and her husband as aids in the education of the children sprung from the union can be wholly or partially dissolved only upon the written approval of the competent military board.

THE PURITAN MILITIA.

WHEN our forefathers landed in this country they found themselves in a boundless wilderness, the absolute architects of their destiny, with no kindred people to influence or modify their social customs. They came from a paternal government to the wild, free shores of the new continent without leaders, "save those whom God raised up as such by reason of their superior abilities." No one among them could lay claim to the prerogatives of ruler from family heritage, and, of a necessity, when this small band were called upon to settle questions of common weal, the minority acquiesced to the will of the majority. No other plan could have been possible under the circumstances, for there was not one great genius among them to assume the character of dictator. These pilgrims emigrated for a specific religious purpose, too well known for explanation here, and therefore they delegated the privilege of participation in their temporal affairs to those only who were of their sacred faith. The laws of Plymouth state that the voter, whom they called a freeman, should be of "sober and peaceable conversation, orthodox in the fundamentals of religion" (Brigham, Compact, 258). This being determined, the subsequent admissions to the franchise were conferred upon applicants by vote of those already privileged, and as full communion with the church was the provisional requirement, the result was that, as the colonies increased yearly by immigration the governing power resided in a minority of the male inhabitants, placing the larger number of men of ripe age in the condition of mere wards of the commonwealth. This disproportion was augmented by the refusal or disinclination of many of the church members to accept or claim enfranchisement, because they did not wish to hold or be eligible to office. This state of affairs was of such concern to the colonies at one time that the General Court of Massachusetts made it a punishable offense to refuse or neglect the duties and privileges of the electoral right. Thomas Lechford, in a contemporaneous review of this subject of the union of church and state (Plaine Dealing, 73; Comp., 17), states that "three parts of the people of the country remaine out of the church" in Massachusetts.* With

*In Plymouth, 1643, about two hundred and thirty persons only had acquired the franchise (Plym. Rec., viii. 173). At the same date only seventeen hundred and eight persons had been invested with citizenship in Massachusetts (Mass. Rec., i. 366; ii. 291).

this preliminary glance at the lawmakers, we shall be able to comprehend more intelligently the character of the statutes they enacted for the conservation of their institutions.

As emigrants they felt no veneration and cherished no love for the establishments of the country they had left, and they chose as the fabric of their government the laws of the Mosaic dispensation rather than the contemporary laws of Old England. After making legal provision for the building up of a virtuous, intelligent, and prosperous society, they proceeded to organize a physical force to carry on their functions safe from enemies without and disturbers within. The Royal government afforded them none of the advantage of military protection, and they were not wealthy enough to maintain a standing army which could be called upon at any moment to be the advance-guard of a colonial defense. The exigencies of mutual protection and self-preservation therefore transformed this peaceful people, who came for the freedom of worship, into a military nation. Hemmed in by a savage race, whose methods of warfare were entirely novel to Europeans, they were obliged to become themselves a standing army. Besides the aborigines, who were a continual menace to the settlers, another enemy, from the North, made common cause with the Indians against the English. France, Spain, and England were the great claimants for the supremacy in the Western continent, and their complications upon the European continent were quickly reflected hither, and the colonists were kept constantly on the alert lest an invasion from Canada should sweep away their territorial possessions. These hostile influences, which were met by the settlers, necessarily involved them in continual skirmishes and battles, either with Indians or French, and oftener a combination of the two. It was a contingency that forced itself upon them, and they went about solving the problem, clumsily, it is true, for the old adage, applied to them in altered sense, describes their condition,—necessity knows no law. In this predicament they formulated their ideas of a military system into the plan of a defensive league, where every able-bodied man should be a soldier. Their logic in relation to the need of such a system was expressed in the following simile: "For as piety cannot bee mainetained wthout church ordinances & offic^{r}s, nor iustice wthout lawes & magistracy, no more can o^{r} peace & safety bee p'served wthout military orders and offic^{r}s."*

Every male, therefore, between the ages of sixteen and sixty, able to bear arms, should compose this provincial army; but, like every

*Unless otherwise indicated by reference, the extracts from the ancient laws hereafter quoted are taken from the Records of the Massachusetts Bay Colony.

other law, this sweeping statute had its exceptions. Due deference to their social relations, with a veneration for the great and good, necessitated this clause, which exempted:

"All majestrates deputjes, offic^{rs} of Court, Eld^{rs} & deacons, the presedent, ffellowes, students & offic^{rs} of Harvard Colledge and all proffessed schoole masters allowed by any two majestrates, the treasurer audito^{r} gene^{ll} surveyo^{r} generall of the armes &c publick notarjes, phisitions, chirurgeons allowed by two majestrates, maste^{rs} of shipps and othe^{r} vessells aboue twenty tonns, mille^{rs} & constant heardsmen & such other as shall by any court be dischardged eithe^{r} for bodily infirmity or othe^{r} reasonable cause." Another statute made an addition to the list in favor of "all fishermen while they are abroad during fishing seasons, ship carpenters w^{ch} follow that calling & mille^{rs}." While these enactments provided for a bodily absence from the training-field, yet a spiritual presence was enjoined by the substitution of "a sufficient man in their roome to traine twice a year, according to y^{e} order," as well as the clause which declared that the favored ones "are to bee ffurnished wth armes."

The unit of their military organizations was the train-band, which must be at least "to the number of sixty-fower persons" besides the officers, and could contain two hundred. Later the law was amended so that "no troop within this jurisdiction shall exceed the number of 70 listed souldiers." Should there be a larger quota of men, two bands were formed, but if any town had less than the requisite number, they were not permitted to elect a full set of officers. Concerning the election of their officers, the following statute will indicate their ideas:

"All persons of any trayned band, both freemen & others, who have taken the oath of residents, or shall take the same & being no covenant servant in household wth any other, shall have their votes in nomination of those psons who are to bee appointed captaines or other inferio^{r} officers of the same band, pvided they nominate none but such as shalbe freemen: for it is the intent & order of the court that no person shall hencefourth bee chosen to any office in the comonwealth but such as is a freeman."

The officers of a full train-band were a captain, lieutenant, ensign, four sergeants, corporals, and a company clerk, who were elected in town-meetings annually by the freemen. This privilege, in 1658, was given to the companies, and obtained for many years, but in 1672 the appointing of the commissioned officers of every rank was then vested in the General Court, and the officers of the bands, who ranked by the seniority of commissions, named their subordinates.

The honor of an office in the militia was much esteemed. Hon.

John Hull, once treasurer of the Province of Massachusetts Bay, and a thriving merchant of Boston, who was chosen a corporal in 1648, praises God for giving him "acceptance and favor in the eyes of His people and, as a fruit thereof, advancement beyond his deserts" (Diary, Archæolog. Amer., 145). When, six years later, he was promoted to be an ensign, he recorded his prayer, "beseeching that the good Lord, who only can, would please to make me able and fit for and faithful in the place I am called unto, that I may, with a spirit of wisdom and humility, love and faithfulness, obey my superiors, so also be exemplary and faithful to my inferiors" (ibid., 147).

The train-band was composed of two kinds of soldiery, the musketeers and pikemen, the numerical proportions being by statute "two thi^{r}ds muskets." The arms of the private soldiers were muskets and pikes, according to the division of the band in which they served. Their fire-arms are best described in the language of the regulations: "No muscquet shalbe allowed for servjce vnder bastard musket bore, & not vnde^{r} three foote nine inches in length, nor any peece aboue fowe^{r} foote three inches." These muskets could be either match-lock or fire-lock, according to the election of the soldier; in the former case the soldier had to be supplied with two fathoms of match in addition to the usual equipments. This outfit consisted of "a priming wyer, worme, & scoure^{r} fitted to y^{e} bore of his musket . . . bandleroes and rests, powder and shott" (Plym. Rec., ii. 65). This diversity in the length of the musket and the choice of match- or flint-lock must have been detrimental to a correct and uniform manipulation in drill. When we consider that no similarity in dress was enjoined, a faint idea of the heterogeneous character of this military body may be obtained. The "bandleroes" (bandoleers) were leathern belts hung around the waist, with pouches dependent for powder, bullets, and other small articles. The rests were crotched sticks for facilitating exact aim when firing. Pikemen, selected for their superior stature, were placed in the front ranks, and carried pikes, which were wooden staffs tipped with a spear-head, or more often with a mere knife or piece of a broken scythe. The pikes, "ten foot at length, at least, in y^{e} woode" (Conn. Rec., i. 74), answer the description of the weapon used by Cromwell's soldiers in 1650, during the civil wars, as we learn from Elton, "Complete Body of the Ar Military." Besides this distinctive weapon, the law further provided "y^{t} those w^{ch} serve wth pykes have costlets & head peeces."

The equipments and ammunition of the private soldier were furnished by himself, but the General Court found that they were not dealing with a moneyed community, and soon had to make provision

for the impecunious. In 1641 the following resolution took into consideration the state of the finances of many, "in regard that mony is now very scarce," and ordered "that ev^{r}y such pson who shall not have mony to pvide powder shalbe excuse fr$\bar{o}$ the penulty if hee shall bring to the surveyar so much corne or other comodity" of equal value. "And for other defects, as the want of a bullet or 2," the soldier was doomed by a magistrate "according to the nature of the defects." The stringency of the money market in those days may be seen from an order which was passed by the court to relieve the depression of business: "Muskett bullets of a full boare shall passe currantly for a farthing a peece, provided that noe man be compelled to take above xij^{d} att a tyme." The pikemen, too, were afforded relief in an enactment which ordered that a "buffe coate or quilted coate" should be used in consideration of the fact "that corslets are wanting to many souldyers."*

The militia officers were privileged characters in all the walks of life, and at a time when the colonists were given to the vanities of extravagant apparel they and their families were declared to be exempted from the laws which were directed against excess in dress. The General Court, in their cumbersome phraseology, concluded that it was necessary for them to appear in fine clothes on account of their exalted station. On duty the commissioned officers carried swords or partisans (commanders leading staff), and, if they desired, could have a pistol besides. The sergeants bore halberds, which were a modified legacy of the weapon of that name in use during the middle ages. At first the captains were maintained by the train-bands, then the general government attempted it, but later the charge was referred back to the several organizations. This maintenance we conclude to be the supply of arms, uniform, and pay to which they were entitled while on duty. Their commissions were issued by the General Court "in parchment fayrly writen," which reached them after a long process of circumnavigation from grade to grade. All the officers were obliged to take special "oathes suitable to thei^{r} places," the tenor of which was a fidelity to the government.

The aggregation of these town organizations formed regiments, which were artificially divided by the shire-lines of the colony. The officers of each county regiment were a lieutenant and sergeant-major,

*The prices of arms and equipments varied considerably, according to quality. In 1633 corselet and pike were rated at one pound ten shillings (Plym. Rec.), and in 1690 a gun was worth one pound. This was old tenor, and cannot be accurately computed now, although in general terms it may be stated to be of greater value than our present currency.

annually elected by the freemen at the town-meetings. The sergeant-major, who was a species of muster-master, was enjoined, "once ev^{r}y yeare at least . . . to drawe fourth his regiment . . . & y^{r} to put ev^{r}y cap^{t} & offic^{r}s of ye companies in y^{ir} places and to instruct y^{m} in y^{ir} duties, according to y^{e} rules of military discipline & to ex^{r}cise his regim^{t} whether it shall consist of horse pikes or musketers according to his best skill & abilities, as if he were to leade y^{m} forth against an ennemi." The several regiments were under command of the sergeant-major-general, an officer inferior only to the governor, who in turn was "to be gene^{r}all of all the military forces" in times of peace. In case of war, a special commander was appointed by the General Court. The regimental officers, from governor down to sergeant, were obliged to meet semi-annually "to consult of such matters as tend to the safety of that sheire," and "to take notice of all millitary affaires." Besides the usual commissioned officers, the spiritual welfare of the troops was not overlooked, and the General Court, mindful of its duty, incorporated this clause in their laws relating to the regiments: "And for the chaplaines . . . to the severall companies the severall townes shall make choice of some principall man or two or three in each town & psent them to the counsell who shall appoint one of them to the office in each company."

With the paraphernalia of the regiments, who only met once a year, and later once in three years, we shall not meddle. The key to the whole system can be studied in the train-band, and to them we shall revert after a brief note upon the numerical strength of the militia. In 1644, just after the colonial confederation, the population of Massachusetts Bay was fifteen thousand; Plymouth, three thousand; Connecticut, three thousand; and New Haven, two thousand five hundred (Palfrey, ii. 5). At the same date in Massachusetts there were twenty-six train-bands, and there had been "of late a very gallant horse troop listed" (Johnson, "Wonder-Working Providence," 190).* Twenty years later the General Court state, in answer to the Royal commissioners, that "our militia is ordered into three regiments of foote besides some supernumary companjes vnder three majo^{rs} & one majo^{r} generall, together withour troopes, consisting of about fower thousand ffoote & ffower hundred horse."

For the proper discipline and exercise of the militia, the eager lawmakers, who were themselves exempt from training in the ranks, ordered, in 1631, "that euy captaine shall traine his companie on Sater-

*The number of males of the military age in Plymouth, in August, 1643, was six hundred and twenty-seven (Plym. Rec., viii. 187-197). As before noted, but two hundred and thirty were freemen.

day in euerie weeke . . . the traineing to begin att one of the clocke of the afternoone." As may be supposed, this regulation was altogether too burdensome; so the next year they reduced it to "but once a monethe," excepting July and August. This was found too much of a task for a people who were busy making new homes, and it was reduced to eight times a year " . . . what dayes & tymes they shall find to bee most fit for avoyding of losse of tyme & the oportunities of the furtherance of husbandry & other busines of the country." After various compromises, all tending toward a reduction of the number of days, the court, in 1679, declared that "for the easement of the country the ordinary traynings of foote & horse are reduced to fower dayes in the yeare, any law vsage or custome to the contrary notwthstanding."

We now come to the great Puritan holiday, when the stern and dignified pilgrim unbent his rigid mien and sated his natural desire for display in the glories of Training Day. Here, gathered upon the town common, was the yeomanry of the village, with polished fire-arm, glittering corselets, and savage halberds. What a sight to thrill the incarcerated sensibilities of the fair maidens of that extremely proper century, when "light conversation" between the sexes was prohibited by statute!

The legal summons upon training-days was "a beacon fired & 4 muskets discharged & a drum beaten at w^{ch} every man shall repaire to his colo^{r}s or appointed meeting place to attend further order." The troops being assembled, the training was opened with prayer (Plymouth Rec., ii. 61), which was the custom at Plymouth, and it is probable that this routine was the same in the other colonies. The clerk of the band then called the roll and inspected, and reported to the captain upon the condition of the arms and ammunition, ascertaining if each soldier had "one pound of powder 20 bullets & 2 fathome of match wth musket, swords, bandilers & rest, upon y^{e} poenalty of 10s for ev^{r}y defect." If any soldier was absent, the clerk reported such absence at the headquarters, when the delinquent person was subjected to the provisions of this rule:

"It is ordered that if any trained soldier shalbe absent from traineing vpon their traineing dayes, haueing lawfull warneing, shall forfect V^{s} & that it shalbe lawful for one of the s^{r}ieants appoyncted by the cap^{t} of the company to levye: vnless wthin 2 dayes after it be demaunded, the pty offending bring a certificate from the nexte Assistant that hee had a necessary occacon to be absent."

These and all other fines for delinquencies were applied "eith^{r} in ensigne, drum, holberds, candle or wood for their co^{r}t of guard, or to pvide powder or armes for y^{e} porer sort."

These little duties and delays being over, the morning review was held, and the train-band went through the excitements of the sham fight and such other maneuvers which were calculated to make them experts in the art of war. This mock battle was one of the features of the train, and was productive of great personal prowess and regimental glory. Old Judge Sewall (Diary, Mass. Hist. Coll., vol. v. 100), the veriest gossip in Boston, and a transplanted Pepys, writes thus in 1685 of the "Training of six companies. Exercise was Taking of the Fort and advancing white Colours with Red Cross above the Red Colours: so it stood while went to Dinner. Then Retaken." Evidently sound in hygienic laws as in the mystical theology of the Trinity were they, for the pangs of hunger were superior to the heroic calls from superior officers. For a time there was no music but the drum, each company having two, the drummers being compelled to serve under a penalty. Gradually this monotonous tattoo was supplemented by the fife and bugle, innovations which shocked the godly people as the church-organ and furnaces did in later years.

Of the manual of arms we know but little, and that would be impossible to explain, except at length, without the aid of illustrations. It will be sufficient to state that the arms were carried in the left hand, and the manual of firing was complicated by the use of the flint and match. To be certain, however, of their intentions about drill, they recorded their opinions as to the propriety of a strict adherence to the code of tactics. Therefore it was thought necessary to state "that all postures of pike and muskett, motions, ranks and files, &c., messengers, skirmishes, seiges, batteries, watches sentinells &c. bee always p'formed according to true millitary discipline."

The noon rest was occupied in the mess, and with such diversions as the enterprising peddlers always brought there to attract and amuse. The venders of small wares, cakes, and milk were there in full force, and with them the dealer in ardent spirits, whose straight whisky made the bibulous private walk crooked. This gradually became a source of trouble, and the General Court, "because of late there hath been toe much d^{r}unckeness," ordered that if any person came to the training-field to sell "wine, strong liquo^{r}s, cider and other inebriating drincks" without a license, their stock in trade should be seized. If the soldier should attempt to pass away the hour with bird or game shooting, he would be informed "that noe trayned soldier shall make any shott vpon any traineing day, but with bullets att a mke by direccon of the captaines vnder the penalty of xij^{d} for eury such shott." If he were given to the pleasures of the games of chance, and should be lured into gambling, using his equipments for stakes, the clerk of the band

would report such fact to the captain, who would then proceed under this clause: "If any shall . . . sinfully play away theire armes at dice or cards . . . they shall be kept as pyoner's or scavingers till they furnish themselves with as good armes."

In the afternoon the same routine was performed as in the morning, and the great day closed with prayer (Plym. Rec., ii. 61), after which time it was enacted that "all trayned souldjers whether horse or ffoote, shall repaire to theire seuerall quarters & lodge theire armes imediately after theire dismission vpon trayning dayes, & whosoeuer shall either singly or in companyes remayne in armes & vaynely expend theire time & powder by inordinate shooting in the day or night" should be subject to a court-martial. We really can know more about the things which they could not do than their actual duties upon training-day, because the regulations are devoted mostly to a description of the penal offenses.

The laws of the courts-martial were strict, and included capital punishment for desertion, seditious language, insult to superior officers, rape, adultery, and unnatural abuses. The lighter offenses of theft, fornication, concealed knowledge of crime, were treated to some "grievous punishment," which was defined as "casheiring, the strappadoe or riding the wooden horse to fetch blood." The strappado was a machine constructed for drawing the offender to the top of a beam and letting him fall, ostensibly to dislocate a limb, and the bilbo was a kind of stock or shackle. They provided also for military honors when a companion in arms died, and the laws of Plymouth (Winsor, 91) state that upon the death of any member "ye company upon warneing shall come together wth their armes and interr his corps as a souldier and according to his place and quallytye." This was the only ceremony the pilgrims would permit at a burial. With their intense hatred of the Established Church and its forms of worship, they were over-zealous in an opposite extreme, and not even a prayer was offered at the cheerless entombment of friend and kindred.

Nor did the military spirit neglect the rising generations, who were mute but admiring spectators at these martial festivities, for they provided the young with a cadet service having all the necessary attention paid to drill and equipment. These logical pilgrims, who always had a habit of apologizing for every law they made, thus expounded their ideas: "Whereas it is conceived yt ye training up of youth to ye art & practice of armes wilbe of great use in ye country in divers respects & amonge ye rest yt ye use of bowes & arrowes . . . all youth . . . from ten yeares ould to ye age of sixeteen yeares shall be instructed . . . in ye exercise of armes as small guns, halfe pikes, bowes & arrowes,"

and "in very company some vnde^{r} office^{r} shall be appointed by the chiefe comand^{r} to exercise such children as by their paren^{ts} or maste^{rs} allowance shall resort to the traynings."

In addition to the work of the train-band service, the towns had military watches, an officer akin to the modern metropolitan police, and the citizen-soldiers took turns in occupying these posts. The watches, which were more for protection from the Indians than from civilized enemies, were kept from "halfe howe^{r} after sunset to halfe an howe^{r} before sunn rising." The court thought it best that the watches "should stand double, a pike & a musketere togethe^{r}," and "if y^{e} sentinell or watch shall meete wth such as shall pve too strong for y^{m}," or in any way "put y^{m} to fear . . . they shall charge their pike & discharge their musket upon y^{m} & returne wth speede to their co^{r}t of guard & raise an alarum." It would hardly be thought necessary to define an alarm, but the specific deputies to the General Court described the proper one to be "the distinct discharge of 3 muskets or the continued beate of y^{e} drum or y^{e} fyring of a beacon, or discharge of a peece of ordinance or any one of these in the night . . . which each sentinell shall answer by going to the houses in his quarte^{r}s & crying Arme, arme."

These citations from the old colonial militia laws are but a tithe of the whole, but are just enough to give us a satisfactory glance at their soldiery. As the settlements grew, and the temperament of the original colonists was modified by various factors, they found it necessary to tinker and patch the early statutes many times to meet new circumstances. Revisions of the entire code are numerous, and each successive draft became more elaborate than its predecessor. Thus it was that the peaceful pilgrim, who came to these shores for the liberty of conscience and freedom of worship, became a man of arms, and thus his children grew up to learn the strategy of offensive and defensive warfare. But as time passed away the necessity for continual apprehension of the savages and their allies grew less as the colonies increased in population and the peace in Europe was settled. In a hundred years after the first settlements in the Bay Colony the paraphernalia of this cumbersome system fell into disuse. The settlers were sated with the pomp and circumstance of war. Yet the training-day lingered in the affections of the people for more than two centuries, and many of our older citizens of the New England States can recall the dying brilliancy of the general muster of the militia. The compulsory train-bands had perished by default, and the volunteer rifle corps, taking their places, merged the "fowe^{r} dayes eury yeare" into one grand encampment and muster of the heroic spirits of the time. Oh,

the glory and the gusto that were crammed into the fleeting moments of those grand old days, when it seemed as if the united armies of the world would be decimated before the swelling ranks of our bold and high-stepping grandfathers!

This embryo militia system, which has a humorous tinge to this generation of readers, became the foundation of our strength in the Revolutionary war, and was the fountain-source of that dauntless spirit which developed so grandly in the late test of our nation's prowess. Then the peaceful citizen suddenly became a man of might, and the transformation was as natural as the change from youth to manhood.

CHARLES EDWARD BANKS, M. D.

A CRUISE ON THE CONSTITUTION.

No. 2.

FROM RIO JANEIRO ROUND THE CAPE OF GOOD HOPE.

THE morning of the 8th of September (Sunday) was very pleasant, and we experienced beautiful weather for many days, accompanied by fresh breezes. Our course was for the islands in the South Atlantic, when change of wind occurs.

On the 13th for the first time since leaving Rio, we saw birds, though not in any quantity. They were the cape pigeons, and resemble the wild pigeons in shape, but not in color, their bodies being white and their wings brown with white spots. They frequently follow ships two thousand miles, leaving them in the longitude of the Cape.

On the 16th, for the first time, I saw an albatross. This bird is about the size of a swan, or between that and a goose, and from wing to wing sometimes measure fifteen feet. The bodies of the young are brown, while those of the old ones are entirely white, and the wings the same. I should suppose the beak to be from three to six inches in length and hooked at the end. The sailors baited a hook with a piece of fat pork, and as the ship was nearly becalmed, quite a number flocked around it. In a few minutes one was caught and safely landed upon deck. For a little while the gluttonous bird was quite seasick and vainly endeavored to lift himself from the deck, but without avail. Its eye was large and black, and well did the poet Coleridge choose this beautiful bird for the subject of his poem of the "Ancient Mariner."

I am sorry to say, however, that sailors have little faith in the opinion of showing mercy to either albatross or shark; the little stormy petrel being the only wanderer safe from harm.

On the 17th we saw an English bark to windward, and hove to, after passing her; this little incident may be thought not worthy of a place in a journal, but it was interesting as being one of the few occurrences of a sixty days' passage.

On the 18th and 19th, we were becalmed and made scarcely five miles during that period. A calm at sea is truly one of the most tiresome events that occurs in a sailor's life. The sails flapping, the

swell of the sea, and the disagreeable rocking of the vessel all combine to render this part of a voyage to many more unpleasant than a "reef topsail" breeze; and when at last we did catch the breeze it seemed an age we had passed. A ship going along eight knots, with beautiful weather, puts a different face upon the affair. All on board enter into the excitement, and the monotony is in part worn away and gives place to good feeling and hilarity. The only amusement found was in the capture of a shark. This fellow was about six feet in length, and was a fine specimen of the genus. He was caught over the stern, hauled in on the quarter deck, carried forward by the sailors, who soon showed their antipathy to the race.

On the afternoon of the 23d the Isle of Tristan d'Acunha was in sight, and we again saw the English bark and boarded her. She proved to be the Lord Eldon, from London for Bombay, and made the island for the purpose of rectifying her observations.

It had been the intention of Captain Percival to send a boat ashore on the Island of Tristan d'Acunha, and orders were given to lie to when within five miles of the beach; but unfortunately a heavy breeze sprang up in the night, and we drifted to within two miles of it. We then wore ship, and the morning of the 24th ushered in a gale which lasted until the night of the 25th. We were thus obliged to keep clear of the island, and stood on our way to the East. During the heaviest of the gale the ship was hove to with her main topsail to the mast, and much of the time had on her only trysails. Her spar deck ports were frequently under water, and life lines were run around the sides. Both of her decks were wet, particularly the main, and I began to see the inconvenience and danger of a sailor's life. The frigate worked well, and during this blow was easier and more comfortable than many other ships would have been. An account of the above island may not be uninteresting, as few are acquainted with either its locality, inhabitants or usefulness.

DESCRIPTION OF TRISTAN D'ACUNHA.

This group of islands situated in the South Atlantic Ocean consists of three, viz.: Inaccessible, Nightingale, and Tristan d'Acunha.

The latter island, the largest and most fertile of the group, takes its name from the celebrated Portuguese navigator. They are not often visited by merchantmen, only occasionally a whaler stops to procure refreshment. The highest land of Tristan d'Acunha can be observed sixty miles at sea and is between 7,000 and 8,000 feet in height. All accounts of the fertility of Tristan d'Acunha are vague, though it is generally supposed to be capable of great cultivation.

Its origin is volcanic, and would undoubtedly be taken advantage of, but that the harbors are extremely difficult of access. Potatoes and vegetables are raised in great abundance, and wild hogs and goats are plenty.

The other two islands of the group are entirely barren, and are always avoided by navigators. Inaccessible is about nine and Nightingale island about seven miles in circuit. Tristan d'Acunha is about twenty-five miles in circuit, and its highest peak is 8,326 feet above the level of the sea. In the year 1811, three Americans remained on the island, to prepare seal skins and oil, but left before 1813. Afterwards a naval station was formed by the English when Bonaparte was taken to St. Helena; this was afterwards discontinued, and transferred to the Isle of Ascension, where it now is. The next account of the island is up to 1821, when the ship Blenden Hall, from London for Bombay, was wrecked on Inaccessible Island on the 23d of June. Here the crew and passengers remained nearly six months, living on penguins and eggs (the only food), until they arrived at Tristan d'Acunha in a boat made from the wreck.

On the Isle of Tristan d'Acunha they found a Scotchman with a small colony of about twelve persons. This Scotchman was the head man on the island and was called Governor Glass, who treated them very hospitably until an English brig arrived on the 9th of January, 1822, and carried them to the Cape of Good Hope. Two of the passengers, however, a man and woman, remained on the island with the colony, and were married by Governor Glass. Shortly after this wreck happened, an English sloop of war (Gloucester, I think), touched at the island to make observations. A passenger (Aug. Earle) obtained permission to visit the shore; but stopping too long, the ship was forced to put to sea, and left him on the island. Here he found the colony in a flourishing condition, one or two children having been born since the departure of the English brig. He remained on the island nearly a year, and describes it as being a most delightful spot, where vegetables of many kinds, hogs and goats were found in great abundance. His narrative is an interesting one, and excited great attention when it appeared. In the month of November, 1824 or 1825, he was taken off by a vessel bound to Van Diemen's land.

In 1829 a vessel had stopped there and reported the colony to have increased, and were very healthy; the children uncommonly so, and free from those infantile diseases in more thickly populated countries.

Governor Glass is yet alive, or was when the Constitution returned from her cruise. The old governor has undoubtedly been the means

of saving many of his fellow creatures from a watery grave, or at least starvation on the neighboring barren islands.

This circumstance, together with a desire to see if any seamen or others were still on the island, induced our commander to lie to; but in the gale of the 24th and 25th of September we were forced to keep away. Interesting information might certainly have been obtained from our visit, and I had congratulated myself upon seeing the strange character who has passed more than thirty years of his life almost exiled from the world.

These islands are under British protection. At certain seasons of the year, gales are frequent, accompanied by a heavy sea for several days before and afterwards, and are only the stopping place for whalers, and ships desirous of rectifying their observations. It is to be regretted that Tristan d'Acunha is so far from any other land, as no doubt exists of this group being capable of great cultivation.

We pursued our course and had very pleasant weather until midnight of October 3d, when a gale struck us off the pitch of the Cape of Good Hope. It might rather have been termed a squall, for it lasted but a little while. Our cross jack yard was carried away broken into three pieces. This was the only damage sustained.

Two days before this (October 1st) we spoke the American whale ship Sally Anne, from New Bedford in eighty-five days, cruising for whales. We parted at dark, and the next morning she was way astern.

We doubled the Cape of Good Hope on the 4th inst., with pleasant weather. On the 5th the cry of "Breakers ahead!" was heard from the topsail yard, but it proved to be nothing but the reflection of a cloud upon the water. Near the longitude we were in, discolored water has from time to time been seen by different vessels, and in consequence of the French brig Telemaque being the first to have discovered it, the spot off the pitch of the Cape is called the Telemaque Shoals. This circumstance happened in the year 1786, and the captain and passengers were of opinion that they had passed over a coral bank of considerable extent, having apparently not more than two fathoms on some parts of it. The danger was supposed so imminent that they did not sound, but kept away. This spot they made in Lat. 38, 50 S. Long. 22, 2 E. (from London).

Since that date, several vessels have seen discolored water near the spot mentioned above, and to all appearances it extended as far as the eye could reach. In 1796, 1807 and 1816, one English and two American ships saw the same appearance, and soundings of 90 to 40 fathoms were *said* to have been taken.

It is satisfactory to navigators to know that the supposed danger of the Telemaque shoal no longer exists; for although said to have been seen by the above ships yet H. M. S. Heron surveyed the spot carefully and published an account of it.

The sea at times presents curious appearances in these latitudes; as in the case of the Constitution, the clouds, for instance, will reflect the rays of the sun at certain angles and cause an appearance of breakers; again, the great quantity of animalculæ abounding in certain seas may have caused the alarm, and vessels have been known to pass over dead bodies of whales, etc., and magnified the circumstance into a large shoal, with soundings, etc., etc. Probably the Telemaque shoal is of one of the above origins, for the fact of its non-existence is settled in the minds of navigators.

Nothing of interest happened after we passed the Cape of Good Hope, until we sighted the island of Madagascar, on the morning of October 15th, 1844. Our course had been for Port Crocker, as it was desired to make the land below St. Augustine's Bay. Accordingly at ten on the morning of the 15th we made the shore about half way between Port Crocker and St. Augustine's Bay. We then kept along the shore, being about four or five miles off until Sandy Island was in sight. We then kept off from a quarter to three quarters of a point east, and rounded Sandy Island at about a mile distant. The land all along shore presented a barren aspect, and any one who has seen either Cape Henry or Sandy Hook, can judge of the appearance of the coast. Sandy Island, which lies about two and a half miles from the mainland, is near the mouth of St. Augustine's Bay, and is about two miles long, and a half to three-quarters wide, with sand and a few trees. There is no cultivation upon this island. Round it a reef of coral extends, to the distance of a mile, and we passed this reef about a mile distant. Between St. Augustine and Sandy Island there is a channel with from eight to eleven fathoms water, and the passage through it is about half a mile wide. Horsburgh's directions for entering this harbor (St. Augustine) are correct, and were followed by Captain Percival. Though this channel is both wide and deep enough for large ships to enter, yet, for various reasons, such as strong currents, etc., it is advisable to go in on the outside of Sandy Island. The reefs and breakers in St. Augustine's Bay are easily discovered. At half past five P. M. on the 15th of October we anchored in the entrance of St. Augustine's Bay, about two miles from Sandy Island, in seven fathoms water. While coming up the coast no sounding had been obtained with twenty-five fathoms line.

ST. AUGUSTINE, MADAGASCAR.

On the morning of the 16th boats were sent up the bay to take bearings of the anchoring place, and Horsburgh's directions were found to be correct. At 10:30 A. M. we got under way, and at 1 P. M. anchored where one of the boats had been left.

Canoes put off from the shore, and we soon had the pleasure of shaking some Malagary by the hand. Prince Green, who owns Tent Rock; John Green, his purser; John Stouts, his toady, and other hangers-on came on board; also Captain Amber, Captain Martin, and others. Prince Green, who appeared to be the greatest man among them, was dressed in a faded pair of tight white pants, an old "pepper and salt" colored coat, given him by an officer of the Concord, and a navy cap with an old faded gold band. He was a man about fifty years of age.

John Green, his purser, as he styled himself, was dressed in the most original manner possible. An old tattered navy waistcoat, one epaulet, a sailor's hat, and pieces of cotton composed his wardrobe. To crown the whole he had an American eagle (brass) fastened onto his vest behind. He had only one eye, and on the whole was the most original looking officer I have ever seen. Most of the other men had nothing but strips of cotton crossing from the shoulder to the hips and fastened round their loins. They soon found their way into the steerage amongst the reefers, and quickly made a good use of the clothes given them. One fellow had a shirt given him, and a pair of drawers, which set tight to his legs, and, with the aid of an old straw hat, was soon transformed into an apology of a well dressed man. With this (certainly to him, at least) finery he was walking the quarter-deck, as proud as any Turkish Bashaw with three tails. Another fellow was honored with the crown of Neptune (used in crossing the line).

Nearly all brought letters of recommendation from different whale ships, which were not very favorable to their honesty. One of the them brought a letter signed by "Sam Slick," stating the bearer to be a rascal and not trustworthy. Not being able to read, he had been gulled into taking it, and it would have done a person's heart good to see the look of approbation with which he received the letter again and carefully stowed it away, presuming, I suppose, that it bore testimony to his honesty, etc.

I went on shore several times and was not much pleased with the visits. The people are beggars and robbers, and I was eased of my 'kerchief in a very short time. Dollars, buttons, beads, cloth, etc., etc.,

are the articles of trade for which the natives give vegetables, fish, spears, etc. No cultivation is seen on this part of the island. The people live in bamboo huts not higher than themselves, and have to crawl in through a door, upon all fours. They appear to resemble pigsties more than the habitations of human beings. Tamarinds grow wild near the Dartmouth River, where we obtained our water, and of these we picked a great quantity to take to sea. They make a very palatable drink, which resembles lemonade. There is nothing in St. Augustine to interest one but observing savage life; the natives are treacherous, and it would be dangerous to stay over night amongst them. Two months in the year, viz., January and February, the sickly season prevails. The chief articles of export from St. Augustine are moss, used for dyeing, and dollars, which the natives receive from ships. Not much can be said of this harbor. The water is bad, or rather thick and muddy, and the wood is not the best; these objections, together with the desire of the natives to pilfer, render St. Augustine's Bay only a resort for whalers. We shall not regret our departure from this sink of knavery. One thing we learned was that the savages are far worse off now than before the white man introduced civilization amongst them.

On the morning of October 20 we left St. Augustine Bay for Mozambique, an old Portuguese settlement on the coast of Africa. At the entrance of the bay we boarded H. B. M. brig Sapho, from a cruise, bound in for water; exchanged civilities and stood on our way to sea.

We had a pleasant passage over to the east coast of Africa, and on the morning of the 25th came in sight of land on the lee, and afterwards on the weather bow. Soon we had the pleasure of viewing the Mozambique shore. It appeared similar to the shore of Madagascar with the exception that the former bore more evidence of fertility than the latter.

After beating about the coast all the afternoon and evening we anchored at 7.30 P. M. outside the port of Mozambique and about half a mile from the island of St. Iago.

On the morning of the 26th we kedged in nearer the city and almost between the two islands, St. George and St. Iago. We were about five miles from the island of Mozambique. The land breezes in the morning prevented our getting up to the port, and the depth of the water between St. Iago and St. George is not sufficient to admit with ease a vessel of great draft of water like the Constitution. The usual channel is outside of St. George. In the morning two officers came on board, and shortly after left with a note to the Governor.

In the afternoon they returned with a pilot and a letter from His Excellency Brigadier General R. L. d'Abun d'Luria, Governor General of Mozambique.

MOZAMBIQUE.

On the morning of the 27th Captain Percival and myself went to the city and called upon the Governor. The general received the captain with great courtesy and expressed great desire to have the frigate nearer the city. He explained the views of the Portuguese Government towards that of the United States of America and evinced much interest in the commercial transactions of our country. It appears that whalers frequently send in boats for wood and water, but rarely visit the port. A steady and lucrative trade is carried on between Salem and New York and Mozambique. The brig Richmond, from New York, and the brig Emmerton (I think), from Salem, are the only two vessels regularly trading. The exports are ivory, gums, copal, etc., for which they receive cotton, etc., in exchange. It being made manifest to the captain that our commerce was not suffering at this port he took leave of the Governor. At 2 P. M. we weighed anchor and stood out to sea for the coast of Madagascar.

I was much pleased with my visit to the city of Mozambique; not for the beauty of its buildings, but for the spectacle it presented of former Portuguese grandeur. Portugal, at the time of its first taking possession of this island, must have been an enterprising nation. The fort (a part of which only is occupied) is capable of mounting 300 guns, and commands the harbor and coast of Africa. It was built in the year 1511. The Governor's house was built by the Jesuits, and is the handsomest in the place. Near it stands an old convent in a state of decay, and, in fact, all the buildings seem to be so, though most are inhabited. The city contains about 200 whites, 1,500 negroes, and a few Arabs, who may be seen walking the streets dressed in their native costume, apparently regardless of the wonder bestowed upon them.

What could have induced the Portuguese to make a settlement in this sickly climate I cannot conceive, unless it was the idea that they had discovered the "Philosopher's Stone" on the coast of Africa, and wanted a commanding post to overlook the scene of action. Immense quantities of slaves are said to be exported annually to Brazil from this island. The negroes are brought from the interior of Africa and sold by their own countrymen to the traders in this inhuman traffic. But the resources that Mozambique was said to possess are fast dwindling away. Its port is hard of entrance. Trade which was for-

merly confined to this island has been extended along the coast from the Cape of Good Hope to the equator, and slavery particularly, one of its greatest sources of revenue, has met the disapprobation of the European powers. These causes, combined together with the port affording no fresh provisions, etc., are continually operating to render Mozambique of less importance as a city than other places along the coast. The enterprise of the Portuguese Government has flagged, and Mozambique now can only present a vivid picture of what we must suppose to have once been a powerful and well fortified port, capable of maintaining itself from aggression by land or sea. But, alas for poor Portugal, the days of its prosperity are over, and that success no longer awaits it which made it the first of nations in the time of Vasco di Gama.

On the night of the 28th of October, 1844, while in the Mozambique Channel, on our passage from Mozambique to Bembatooka, we had the pleasure of seeing a beautiful meteor. It was about half past nine o'clock in the evening. The sky was clear, but the horizon rather misty. The moon was at its full. The meteor presented the appearance of a large blue light, tinged with red. It was first observed nearly above the ship, and descended, until near the edge of the horizon it disappeared. I have seen what are called shooting stars, but this meteor did not resemble them either in shape or color. It did not appear to be very far from us, for while on the descent it lighted up the whole rigging of the ship.

On the 31st of October we saw land, and anchored at 8 o'clock in the evening until 4 o'clock the next morning. November 1st, in the afternoon, we anchored in Majunga Bay, Madagascar.

Immediately afterwards a boat put off from the shore, and we received three officers of the Queen, who brought the Governor's respects, etc.

MAJUNGA.

Majunga is situated on the northwest coast of Madagascar, and is one of the principal seaports. The Queen of the island has erected a fort on the hill in the centre of the town, and a garrison of native soldiers is placed in it. The town is mostly occupied by Malagash and Arabs, and is the most civilized place we have yet seen on the coast. The trade of Majunga is in hides, horns, etc., for which is exchanged clothes and fancy articles. Several American vessels from Salem, Mass., regularly take cargoes from here, and an agent for the owner (David Pingree) resides in the town at present. The town of Bembatooka lies farther up the bay, and is not of so much importance as

Majunga. Formerly, in King Radama's time a considerable trade was carried on with both places, principally in hides and jerked beef, but Majunga, being nearer the sea, has taken the greatest part. Bembatooka Bay takes in the whole from the sea side to the mouth of the rivers, and is very beautiful and large, but the depth of water is not sufficient for a vessel drawing more than twenty-four feet. Our anchorage off the town was in five fathoms.

The people that we have seen are far more civilized and educated than those in the southern part of the island, and pay more attention to their dress. A regular currency is established here of small pieces of silver cut with the chisel from dollars; these represent one-quarter, one-eighth, etc., as the size indicates. If one were to purchase an article for fifty cents, and he had a dollar to pay for it, the only resource is the chisel, and both buyer and seller are possessed of *real* halves. A considerable trade is carried on with the Bombay merchants or Hindoos, a party of whom we saw. They had remained a year at Majunga, and should return to the East. Sometimes they ascend the river to Tananarivo, the capital of the island, and then dispose of their goods. The American trade carried on here is lucrative and amply rewards the adventurous Yankees engaged in it. The American character is much more respected here than at St. Augustine's Bay, and the arrival of an American ship is hailed with pleasure.

On the morning of the 2d we saluted the Queen of Madagascar with a salute of nine guns, with a white flag at the fore. This salute was returned from the fort on shore with an equal number. The Malagash flag appeared to be of this appearance.

On the morning of the 5th we left Majunga Bay for the island of Nos Bey, at the mouth of Passandava Bay, about 170 miles north of Majunga. During our stay at Majunga we had many opportunities of judging of the civilization of the place. The fort on the high hill in the center of the town has a battery of nine-pounders and a garrison of native soldiers. The extent of the fort is very large, and its interior is laid out into streets, which contain huts, where the soldiers reside. The officers have uniforms, but they are as various in color as the hues of the rainbow; some had English, others American and French. No trade of any consequence is carried on with the English and French. The American market supplies the inhabitants with cottons, and I saw quite a quantity of A. & A. Lawrence & Co.'s goods piled up in a storehouse to be exchanged for hides. The Governor always receives ten per cent. on goods imported by the American agent and also ten per cent. on the value of the hides exported. The mode of trading is to give so many yards of cloth for a hide, and as

the natives do not know the value of the cottons the trade has become profitable. The trade is in the hands of Salem merchants, and when it will be noticed that a passage from the northwest coast of America cannot be performed in less than five months, while from Majunga three months is allowed for an ordinary voyage, the advantage and profits that must ensue from our intercourse with Madagascar will strike every one. I was told by the agent for David Pingree, Esq., of Salem, that American cottons were the only ones imported into Majunga. They are preferred by the natives on account of their cheapness and better quality. Different authors disagree about the month of the year when the fevers commence in this part of the island. A Mr. Abrahams, a Bombay merchant, and a person of general information, informed us that the healthy season was setting in, while Ellis, Owens and others would lead one to suppose that the sickly season was commencing. The month of November in Majunga answers to the beginning of spring in America, for here they are just preparing to plant, only waiting for the rains to set in to moisten the earth. The former gentleman accounts for sickness in Majunga by the following reasons: That the land breezes are prevalent prior to the spring of the year; these bring with them the exhalations from the lowlands, and a malaria springs up which proves fatal to the health of the natives, and he said that shortly before our arrival there had been weeks when no sea breeze had been felt. During a period of fifteen years that he had resided in Majunga he had been sick only once, and then only for a short time; he applied the old-fashioned but certain remedy of an emetic.

While we were at anchor in Majunga Bay, the regular land and sea breezes set in; the former commencing at about 4 o'clock in the morning and lasting until 10 o'clock in the forenoon, and the latter the remainder of the day and night. We observed every evening a great deal of lightning, but little thunder. A heavy shower of rain fell on the night of the 3d, but lasted only for a short time. I think I never heard the rain come down with so much force in my life. It seemed to *pour* rather than to fall in *drops*.

I come now to the most interesting circumstance of my visit to this town of Madagascar. I was shown an awful evidence that the crimes of robbery, arson, etc., are most severely punished. It appears that three natives had burned and robbed the storehouse of Mr. Vincent Marks, the agent for the American merchants. They were discovered, and were condemned to the flames, their heads to be stuck upon poles on the beach as a warning to others who might feel disposed to appropriate their neighbors' goods to their own use. One of

these skulls was yet to be seen on a pole, while the other two had fallen to the ground. It had remained up for six months; the hair was yet visible, and a part of the inside of the skull. The teeth were all sound, and the most perfect sets I have ever beheld. The scalp had not decayed, and the lower jaw was hanging by a portion of it. The two other skulls were smuggled aboard ship by some "reefers," and will probably adorn their studios at the termination of the cruise. On the whole we experienced much pleasure from our visit to Majunga.

On the evening of the 6th of November we made the land a little south of Passandava Bay, and it remained in sight until next morning.

NOS BEY.

On the afternoon of the 7th we anchored off the above island, near the town of Passandava. This island lies at the mouth of Passandava Bay. It is about twelve miles in length by four or five in breadth, and is of volcanic origin. The Constitution claims the merit of being the first American man-of-war that has ever visited Nos Bey. It is in possession of the French Government, who have erected a fortress upon it and stocked it with soldiers from the Isle de Bourbon. The isles of Mayotta, St. Mary's and Nos Bey are under the same administration. The latter island is by far the prettiest place we have visited since leaving Rio Janeiro, not so much for the beauty of its internal arrangements, but for the fertility of the soil and the appearance it presents while entering Passandava Bay. It bears a strong resemblance to the Western Islands, and differs from them only in its want of civilization. In fact, the surrounding islands of Nos Cuba, the "nine pins," etc., which lie in the bay, are fully as beautiful as any of the Canary Islands. Nos Bey was formerly in possession of the Sakalava tribe, but about five years since the French bought it; ever since that period great exertions have been made to civilize the natives, but I should judge that they were not successful. Many Arabs reside on the island, who have formed a village of their own a short distance from the main settlement. They trade with Zanzibar by means of dows, which are small vessels about the size of a coasting sloop. Many Bombay merchants live here who trade between Joanna, Bombay and Zanzibar, and the island will ultimately become of some importance. There are 15,000 people, most of whom are Sakalavas. In this island the French, as in all their foreign possessions, exercise a despotic sway, and by this means have gained the hatred of the natives. The object of France is to obtain possession of Madagascar, and, with the islands of Mayotta and Nos Beh on the west

of it and St. Mary's on the east, all of which can be well fortified, its chance of success is great. We had heard a great deal said of the fine opportunity for obtaining refreshments at Nos-beh, but unfortunately we have found the rumors false. The water is excellent and easy of obtaining, as vessels can lie within two cables' length of the beach. Springs of pure water are found in great abundance along the shore. Potatoes, yams and other vegetables necessary for a ship's crew are scarce, but whether withheld by the French or not I cannot say. Many American whalers stop at Nos-beh to refresh, but we have no regular traders. Rice is, in fact, the only article of export, and the French have entire control of the market. It is shipped to Bourbon in exchange for light wines and fancy articles.

On the morning of the 12th of November we weighed anchor and stood out to sea with the land breeze, our course being for Zanzibar.

REMARKS UPON MADAGASCAR.

In the United States little is known of the above vast and fertile island, and it is only a few years past that the Government has turned its attention to it as a source of commerce. The French and English have known it for years, and the best accounts show that Malays and Arabs had knowledge of it from time immemorial. In the year 1506 it was discovered by the navigator, Lawrence Almeyda, and it received the name of the Isle St. Lawrence. The Portuguese Government (I think) shortly afterwards sent a person to survey its interior, and the celebrated voyager, Tristan d'Acunha, to sail around it, and to observe its headlands, capes, etc. This large island, according to several authors, is the Cerne of Pliny. Its length is about 840 miles and it runs from the north northeast to south southwest. Its proximity to the coast of Africa and its extreme fertility have made it an object of desire, and several European powers have striven to conquer it by extending civilization and Christianity amongst the natives, but without success. In the days of Radama, called by some the Napoleon of Madagascar, the English obtained great ascendency, but at his death were expeled from the island. They had established schools, churches, etc., at the capital, Tananarivo, and received the protection of his majesty. Workshops were also introduced; artisans sent out from England arrived, and numbers of the native youths instructed in the different trades. Everything flourished, and many of the inhabitants were baptized in the Christian faith. Radama had evinced great wisdom and a profound respect for the talents displayed by the English. He had brought under subjection nearly all of the different

tribes and was exerting himself greatly in striving to induce his people to use those powers and capabilities which he knew they possessed. His untimely death, however, in the midst of his undertakings, in the year 1826 (I think), put a stop to the designs of the English. A party was formed against them, and they were expelled by Radama's Queen from the island. Much civilization, however, had been introduced by the missionaries, which still exists at the capital. Severe laws were made against the Christians, and many natives returned again to the worship of their own gods. One of the secretaries to the Governor of Majunga, who spoke very good English, told me he was a Christian, and had been taught by the missionaries at Tananarivo. All of his worship was done in secret, and he was actually in fear of his life. He said his brother at the capital, also a Christian, had some time previous to our arrival been discovered praying in his room. He was taken, tried for the *offence,* convicted, and sentenced to be torn in pieces. This dreadful sentence was executed. No attempts have been made since the failure of that expedition to introduce civilization in Madagascar. Within the last five years, however, the French Government have obtained possession of the islands of St. Mary's and Nos Beh, and fortified them. It is evident that France is trying all in its power to colonize the island of Madagascar. Several Frenchmen reside at the capital, and it is said have an influence upon the actions of the Queen. Whether these men were sent by the Government is not known, but one thing is certain, that the French are gradually usurping the position held by the English in the time of Radama.

Much of the interior of Madagascar remains unexplored, but that part of which we have knowledge leads to the belief that this island will ultimately become of vast importance. It is rich in various kinds of gums and dye woods; besides, it is one of the best rice growing countries in the world. Great quantities of hides are exported to the United States. The inhabitants are Pagans and Mahometans; the latter are generally found on the coast. Their complexions differ. Many are nearly white, probably descended from Arabs and Christians, while others have the features and other marks of the negro race. At Majunga and Nos Beh the people are Arabs and Sakalavas. At St. Augustine Bay we saw none but Sakalavas; this tribe is the most ferocious and cruel of any on the island, and the Queen has in vain since the death of Radama endeavored to subdue them. Their complexion is darker, their features more regular, than the Hovas. The latter tribe do not wear the hair plaited, while the Sakalavas do. Bembatooka and Majunga are under the dominion of the Queen. I

should have mentioned that the Sakalavas at Majunga are slaves, the Hovas being the original people.

Since the days of Rochon, who published his "Voyage to Madagascar" in the year 17—, and who visited the country around the coast, and therefore left a wide field for conjecture, no accurate account has been given of Madagascar, except by the English.

Ellis, a missionary, who resided at the capital during the reign of Radama, and frequently made excursions into the interior, published a "History of Madagascar," which for the customs and manners of the people may be considered as true and authentic. But the Abbé Rochon has been considered the best writer, though he did not go into detail, never having had the opportunity of the English missionaries. Having myself read the two accounts, I come to the conclusion that Rochon was the pioneer, by whose assistance Ellis formed the groundwork of his history. Rochon in his work advised all nations to interest themselves in cultivating a friendly intercourse with Madagascar, while Ellis looked upon the island as the exclusive property of the English.

Various ports on the coast have been the resorts of pirates, and it is said that the famous Captain Kidd had possession of the island of St. Mary's, and that he frequently rendezvoused at St. Augustine Bay

After a very pleasant and exceedingly short passage of six days from the island of Nos Beh, we arrived at Zanzibar on the 18th of November. We arrived off the island on the afternoon previous, and anchored off Point Tombat, and sent a letter by a dow to our consul, Mr. Waters, asking for a pilot. The next morning early we got under way and stood up for the city.

ZANZIBAR.

The island of Zanzibar is about twenty-five miles from the coast of Africa, and is about forty miles in length and ten in breadth. The eastern side is formed of coral, and reefs extend out from it at least half a mile from shore, while the western side is fertile, with a beautiful sandy beach.

The appearance of the island is low and level. As we passed down towards the city immense groves of cocoanut trees met our sight; also another kind of tree which appeared to be under cultivation. This we afterwards ascertained to be the clove tree, from which the Sultan derives an annual revenue of $100,000. The harbor of Zanzibar is extremely beautiful and large; notwithstanding we had been led to apprehend considerable danger in navigating this bay, none was found, and only that diligence was required which would be expected in the

commander of so large a ship entering a strange harbor. Thus far on the coasts of Madagascar and Africa the surveys of Captain Owens had been used, and they were found correct.

On the morning of the 19th we received visits from our vice-consul, W. C. Waters, Esq., of Salem, Mass.; one of his highness' officers, and the commanders of the French corvette Berceau and an English sixteen-gun brig.

His highness the Sultan sent a present of sheep, kids, fruit and vegetables, which was indeed very acceptable, and was an expression of the liberal feelings entertained by the donor.

This island, as well as nearly all of those north of it, is in possession of the Imaum of Muscat, who at present resides here. He is represented as being a person of much information and character.

On the 20th a party of the officers accepted an invitation to dine with the Sultan. Accordingly at the appointed time we went to the palace, and were received at the gate by the Sultan himself, accompanied by his sons and grandsons. He appeared to be about sixty years of age. His beard, which descended half way down his breast, was gray, and altogether he would be called a fine looking man. His dress was very plain, but neat, and differed little from those of the chiefs around him. He shook hands with each of the officers, and seemed pleased with the visit made to him. He then led the way into the dining room, and after our consul, Mr. Waters, had spoken a few words of congratulation to him, through the interpreter, we sat down to the feast. Our host did not eat with us, nor sit at the same table, but, with his principal officers, occupied a settee. We were waited upon by the eunuchs and other officers of his household. To attempt a description of the viands is almost useless, as the contents of no two plates were alike, and it would be an endless job. What attracted the most attention was the originality of the arrangements. Plates were piled upon plates, and the table was literally groaning with the weight of the viands. Three goats roasted whole and two sheep curried whole formed the principal items. About twelve of us were present, and there must have been rice enough for our ship's company. It was useless to count the chickens and other fowls. All kinds of fruits and pastry filled up the crevices. But the richest treat to me was the sherbet. It is made of rose water and honey, and is a most delicious drink, but when much used leaves a sickening taste in the mouth. It was as clear as the best spring water, and each person had a decanter before him. (The interpreter called it "Mohammedan grog," and I thought it a great pity that the "Christian grog" was not as harmless.) After dining and shaking hands again with his highness we

left and walked through his grounds. Immense groves of cocoanut trees are seen everywhere in the neighborhood of the palace, and the clove likewise. Never having seen either of these two useful articles growing, I was much pleased with the walk. Pineapples are also frequently met with.

The next day we moved our anchoring place nearer the city. Captain Percival made an official call upon the Sultan and was very kindly received. His highness evidently has a partiality for the Americans, owing probably in part to their unostentatious manners, and more to the fact of their not fortifying the islands in the Mozambique Channel, as the French and other nations have done.

At Zanzibar we found several Americans, agents for the Salem merchants, who carry on a lucrative trade in ivory and gum copal. Our vice-consul, Mr. William C. Waters, and Captain John F. Webb did everything in their power to render our stay as pleasant as possible. It would indeed be a gratifying circumstance could we find in every port we stop at so many friends as at Zanzibar.

On the afternoon of the 26th of November we left for the coast of Sumatra, and at sunset were obliged to anchor off the small island of Choomby, about seven miles from the city. The next morning early we weighed our kedge and stood out to sea.

REMARKS.

Zanzibar is the most civilized place we have visited since leaving Rio Janeiro. Its inhabitants are mostly Arabs, though we find great numbers of India men, Banians, Negroes, etc., who are called the floating population. The trade is carried on almost exclusively by the Banians, many of whom are the wealthiest people in the place, and have dows running from Bombay and Mozambique. The streets are very narrow and dirty, though the shops are generally kept clean. The town from the harbor presents quite an interesting appearance, as many of the old forts built by the Portuguese are still in existence. The houses are those occupied by the higher classes of Arabs and foreigners, and are mostly of stone, while the slaves and poorer inhabitants live in huts. Many of the houses, particularly those built by the Portuguese and Arabs, have much carved work about them, and are evidently the relics of a period when the arts were more cultivated than at present. One of the most interesting sights is to observe the people of the different nations represented in Zanzibar. The Arab, as owner of the soil, has not that supplicating look and downcast eye that we see in the traders at Nos Beh, but he walks

proud and erect; his turban has an extra fold in it, and he has that ornament of the real Arab, the cimeter. Next comes the Banian, with his white robe and large red turban, creeping and crawling along, his eyes now and then glancing fiercely, but not a muscle of his face moving, to tell the inward workings of his mind. He takes notice of no one and appears brooding over the downfall of his race. Yet, notwithstanding the piercing eye and I might almost say wicked expression of countenance, the Banian will harm nothing, not even a fly. His religion teaches him to spare the humblest of God's creatures, and not one mouthful of flesh has ever passed his lips. How many Christians might follow the Banian's precept of kindness to his fellow creatures, or even think of our Saviour's words, "Not a sparrow falleth to the ground without our Heavenly Father knoweth it."

The next person of interest is the Hindoo, or India man, who is likewise a trader from Bombay. This personage is just the reverse of the Banian in looks, actions and dress. He is distinguished by the white turban and slippers. He has also more of the supplication in his manner, and is generally considered among the Arabs what the Jew is among Christians. When he enters your dwelling he takes the lowest place, endeavoring to get as far from the gaze of men as possible, in this respect differing from the Arab, who thinks he is doing you an honor to sit with you.

But the person who attracts the attention of almost every one for his mild and interesting features is the Parsee, or fire-worshipper of India. I met one who was the personification of manly beauty. Without the fawning and cringing manners of the Hindoos, the Parsee possesses qualifications nearly allying him to the Christians. His life is abstemious, his manners plain and unostentatious. He does not intrude his presence upon strangers without being invited, and he is looked upon as being more entitled to confidence than any of the other natives of India. You will know him by his long robe and tall cap; in fact, he is the only one (so it is said) of the many different races who visit Zanzibar that wears the latter article of dress. His person has a certain neatness attached to it that would immediately attract the notice of even a careless man.

The negro here, as in all other slave marts, is a miserable and unfortunate being. No one pities him, and no one feels for him, excepting strangers, who have not the means of assisting him. A tear must be dropped by every one who will reflect upon the degraded condition of his fellow being and think what a curse was inflicted upon the world by slavery. Such are the people of Zanzibar now, and such they were at the time of its settlement by Europeans.

Zanzibar is undoubtedly the most profitable of the possessions of the Sultan of Muscat. It has the most foreign trade of any place on the east coast of Africa, three-fourths of which is in the hands of American merchants. When the exports of ivory and copal shall have ceased two other articles remain, namely, cloves and sugar. The former was introduced about sixteen years ago by the present Imaum, and he now receives $100,000 annually from the sale of that article. The sugar-cane grows abundantly in Zanzibar, and of a superior quality, and the two articles mentioned must eventually become a source of great wealth to the Sultan. The Imaum is a strict Mussulman, having his four wives and a large array of "lesser stars" to the number of seventy. He is a firm follower of the laws of the Koran, one of which is "blood for blood." An American residing at Zanzibar related the following fact: "A short time before the arrival of the Constitution an Arab of some distinction had been murdered on the beach. His murderer was discovered and taken before the Sultan for trial. There th brother of the deceased person claimed the murderer, as he wished to kill him with his own hand, in the same manner as his brother had died. He cited the Koran as his authority, and the Sultan decreed the prisoner to him to execute. The family of the prisoner endeavored to buy him off and offered $200 for his release. A person with the above sum in Zanzibar is considered rich, but this was no inducement to the brother, who would have died rather than forego his revenge. The captive was then taken to the beach, where the murdered man was found, and stretched upon his back, his arms and feet being held by some friends of the deceased Arab. He was stabbed by the vindictive brother three times in the heart, and his body given to his friends."

The Imaum's power over his subjects was evinced in a little fact which occurred during our stay. He had sent his officer one morning to buy fruit in the market for a present to the officers of our ship. Upon getting to market he found the best had been sold, and a poor, unlucky Arab was standing by who had just purchased it. Our friend stepped up to him, seized the fruit, and bade him begone about his business. But an Arab will not quietly bear an insult, and he endeavored to recover his lost property. "It is for the American," said our friend, "and his highness has ordered me to procure the best in the market." The disappointed Arab slunk away, while our friend walked out of the market with his spoils, upon which, thanks to his highness, we were shortly regaling.

B. F. Stevens.

*THE OPENING OF THE WAR**

"THE Japanese Government having exhausted in vain every means of conciliation, with a view to removing from the relations between the two countries every cause for future complications, and finding that their just representations and moderate, unselfish proposals, made in the interests of a permanent peace in the extreme East, are not receiving from the Russian Government the consideration which is their due, have resolved to sever their diplomatic relations with the Russian Government, which, for the reason named, have ceased to possess value."

This communication was made to Count Lamsdorff at St. Petersburg on Friday, February 5, and was surely sufficient warning that war, if not absolutely certain, might break out at any moment. Indeed, these are the closing words of the Russian official communiqué replying to the Japenese memorandum with reference to the severance of diplomatic relations:—

"The Imperial Government, while laying upon Japan the full responsibility for any consequence of such a course of action, will await the development of events, and the moment it becomes necessary will take the most decisive measures for the protection of its interests in the Far East."

It is an old cause of complaint in both our own and foreign navies, that the interests of the navy and the influence of sea-power have been too often pushed on one side as of minor importance. One reason for this is, that the sea service very seldom has a powerful representative who can exercise a commanding influence in the councils of the State. In the Far East the Russian navy can make no such complaint; not only is Admiral Alexieff Russia's Viceroy in the Far East, but he is a man to whom most remarkable powers have been delegated, and it is absolutely certain that none can have had a freer hand than he in making the dispositions necessary for the protection of the interests of his master the Czar.

What were these dispositions? I gave last month a concise account of the relative fighting value of the rival fleets in the Yellow

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Sea; and on the assumption that the Japanese personnel would not fall short of the efficiency of their supposed well-trained opponents, I gave Japan the advantage at sea in the proportion of 5 to 4. There has been a prevailing opinion for some time past in naval circles that the personnel of the Russian Black Sea fleet is inferior to that of their Baltic ships—the Far East fleet has been looked upon as the most efficient of all the Russian squadrons—so that naval men looked forward with the greatest interest to the opening moves of the war for which the combatants had been preparing for months, and in which, on the side of the Russians at any rate, an admiral exercised full sway both afloat and ashore. What "decisive measures" would Russia take, and when should we learn their effects?

Maneuvers very commonly leave much to be desired as a picture of naval war; they are all too short, and it is extremely difficult to fairly represent all conditions of a modern naval campaign in a few days. But one phase of modern war has been pretty thoroughly rehearsed, discussed, and exercised—namely, the opening moves from the time that relations have become strained, until either a formal declaration or a definite act of war makes hostilities certain. How familiar we are with the various phases, the despatch of scouting cruisers to shadow the enemy, the endeavors to gain accurate intelligence of the force and movements of the various squadrons which he is preparing, the secret preparation of the torpedo flotilla, and the sudden dash at any fraction of the enemy's forces that may expose itself to these insidious small craft.

Every one agrees that early and continuous intelligence of the force and movements of the enemy or possible enemy is of the highest importance, and that above all things it is necessary to avoid the exposure of valuable ships to torpedo attack unless the advantage gained fairly counterbalances the risk run. It may be necessary to take up certain commanding positions notwithstanding the torpedo menace, or in pushing home a reconnaissance risks may be run in order to gain indispensable information; otherwise it is distinctly desirable to give the enemy's torpedo craft and torpedo stations a wide berth.

Let us apply these principles to the state of affairs in the Far East when, on Friday, February 5, diplomatic relations were broken off between Japan and Russia.

The disposition of the ships seems to have been as follows: The bulk of the Russian force was at Port Arthur, and included seven battleships, Tsarevitch, Retvizan, Pobieda, Peresviet, Poltava, Petro-

paulofsk, Sevastopol—good ships all of them, averaging 13,000 tons; also the armored cruiser Bayan, and the five protected cruisers, Pallada, Askold, Diana, Boyarin and Novik. The four best Russian cruisers were at Vladivostok—namely, the Gromoboi and Bogatyr (with guns protected by armor), and the Rossiya and Rurik (with protected water-lines but unprotected batteries). The three largest are 12,000 tons, and the Bogatyr 7,000. The new fast cruiser Variag of 6,500 tons was at Chemulpo, with the out-of-date sloop or gunboat Korietz.

The Japanese fleet was concentrated at Sasebo in the Straits of Korea; it consisted of the six splendid battleships, Mikasa, Asahi, Hatsuse, Shikishima, Fuji, and Yashima, 13,000 to 15,000 tons; the 10,000 tons armored cruisers Idzumo, Iwate, Asama, Tokiwa, Yakumo, Azuma, and 4,500 tons protected cruisers, Chitose, Kasagi, Takasago, Yoshino. This fleet comprised practically the whole of Japan's fighting force; and since the island Empire of the East depends absolutely on sea-power, the magnitude of the stake played by her strategists when Admiral Togo was sent to sea on February 6, with intent to carry the war into the waters of the enemy, can well be conceived. Not a single vessel of any fighting value was left in Japan. The two cruisers purchased from Italy were just leaving Singapore. Four small second-class protected cruisers, the Takachiho, Naniwa, Suma, and Akashi, under Admiral Uriu, who flew his flag in the first-named ship—an Elswick cruiser eighteen years old—were acting as a convoy to five fast transports, which seem to have started about the same time to make a dash at Chemulpo and Seoul.* There are but five other cruisers of any size on Japan's navy list; they are all over twelve years old, and not of much fighting value. Whether they remain in the Inland sea or in the neighborhood of the capital has not been divulged. At any rate there has been no manifestations of anxiety for the safety of the Japanese ports, such as too often hampers the offensive power of European and American fleets. Admirals Togo and Uriu also took with them the best part of the Japanese torpedo flotilla; and I doubt if any island kingdom has ever been left so completely without any representatives of its fleet as was Japan on Sunday, February 7. Their whole force was on that day 800 miles from Tokio, steaming steadily away towards the Gulf of Pechili, over which looks the great Russian fortress of Port Arthur, with its powerful battle fleet and swarms of torpedo craft. The little men of the Far

*Some reports state that the armored cruiser *Asama* was also with this squadron; others place her with the main fleet.

East, indeed, did a bold and resolute thing in deciding to strike single-handed at the Colossus of the North—a Power which during the last ten years has been straining every nerve to build up such a powerful navy as would make it, if not the second, at any rate the third sea-Power in the world. True that war had not actually been declared; but had the waters outside Port Arthur been patrolled by the large torpedo flotilla, numbering some thirty to forty modern craft, which are based on that port, the Japanese fleet would not have been in a very pleasant position, for they might have met this flotilla off Port Arthur on the night of February 8-9. The first shot had already been fired by the Russian gunboat Korietz at a Japenese torpedo-boat off Chemulpo in the afternoon of Monday the 8th, and though this was evidently unknown to Admiral Togo, the fact remains that some of the Russians at any rate were ready to strike. Had the Japanese come across the Russian torpedo craft on Monday night, the war would probably have begun by a discharge of Russian torpedoes, and possibly the sinking of one or more Japanese battleships.

When the news flew all over the world on the morning of Tuesday, 9th February, that three Russian ships had been struck by torpedoes, it was the general impression that the Japanese, acting on information received of the exposed position of the Russian fleet, had carefully prepared, planned, and executed the daring and successful attack with which the war practically began. Admiral Togo's dispatch rather points in the opposite direction—namely, that the attack was due to the Japanese suddenly discovering the Russians in a most exposed position, which absolutely invited torpedo attack. On Monday afternoon at least seven Japanese torpedo craft—whether boats or destroyers is not clear—were at Chemulpo, some 260 miles from Port Arthur. If the fact of the exposed position of the Russian fleet had been known, it may be considered as almost certain that these vessels would have steamed across the Yellow Sea, and there would have been a much more formidable attack, not on Monday but on Tuesday night. From Admiral Togo's brief and most modest dispatch it appears that his view of the midnight encounter was, that "the Japanese advanced squadron attacked the enemy's advanced squadron, the enemy's vessels being mostly outside the bay." No one could have conceived that the Russian battle-fleet, having a safe torpedo-proof harbor within a mile, would anchor and remain all night in an open roadstead, thus absolutely inviting torpedo attack. And that not only would the battleships be thus exposed, but the destroyers, whose main and principal function it is to safeguard the heavier ships by keeping at a distance any lurking torpedo craft, would be themselves actually

in the harbor. Thus the sheep were outside the fold, and the dogs safely ensconced within.

Under these circumstances Admiral Togo's "advance squadron" crept up to reconnoiter. At the time of writing it does not appear by any means certain what these vessels were. If, as seems likely, Admiral Togo's objective in proceeding off Port Arthur was to engage the Russian fleet, which had been cruising in the Gulf of Pechili during the previous week, he would naturally keep his fleet some distance away during the night, and send on a certain number of destroyers to reconnoiter and if possible to attack any ships that might be exposed. The Japanese destroyers, however, carry the 18-inch torpedo, and if this weapon had been used, the three ships hit would almost certainly have been sunk in a very short time unless protected by nets. The very moderate amount of damage inflicted, as shown by the fact that all the ships hit got under way and steamed some distance towards the harbor entrance, rather points to the use of the 14-inch torpedo, which is only carried by torpedo-boats and ships' picket-boats.

If the Japanese took their torpedo-boats to Port Arthur, some 550 miles from Sasebo, it would be a notable feat, but not a very likely one, as these small craft seriously hamper a fleet. Whatever the craft were, it is evident that they took the Russians by surprise. According to the lucid account of the master and seamen of the British steamer Columbia, it seems that the Russians were first arounsed by the explosion of the torpedoes which hit the ships. No mention whatever is made of the torpedo-nets being out; indeed the indications point entirely in the opposite direction. The Russians alone among the Continental nations adhere to the torpedo-net, and it would be very remarkable if its use has been neglected on this occasion; but there seems no doubt that this was so. In any case the cruiser Pallida is not fitted with nets, and as the torpedo which struck her seems to have done about the same amount of damage as those which hit the battleships Tsarevitch and Retvizan, it is almost certain that those ships do not owe their comparative immunity to the use of nets.

The officers in command of the Japanese "advance squadron" managed well in selecting the two best battleships for attack. It is of course possible that this was to some extent accidental, as Admiral Togo was not aware when he sent off his dispatch on the 10th that the battleships had been hit by torpedoes. But the fact that all the ships hit were large ones would seem to indicate that the Japanese torpedo craft directed their torpedoes with discrimination. A report from Osaka, not well substantiated, states that there were some nine or ten destroyers attacking with twenty torpedoes, but it is hard to

believe so many torpedoes missed their mark, unless indeed the destroyers or torpedo-boats arrived at considerable intervals, which allowed the nets to be swung out after the explosion of the first torpedo had warned the Russians to be on the alert. None of the attacking craft were injured, nor were they aware of what ships were hit, for Admiral Togo as late as Wednesday the 10th thought that there had been merely an encounter with the Russian "advanced squadron"—*i. e.*, the cruisers.

The Japanese main fleet must have given Port Arthur a wide berth on Monday night. They probably arranged to meet their advanced squadron at daylight on Tuesday somewhere to the eastward of Dalny, as they were sighted from that place between 9 and 10 A. M. Their design was evidently to offer battle to the Russian fleet and to cut them off from their base if they had ventured out for a cruise, as they had done the week before. In this they were disappointed; but the Russian ships which had been damaged by torpedoes being still outside the harbor, probably waiting for high water, it was in any case incumbent on the remainder to support them if fired on by the Japanese. This they did, and there occurred what Nelson would have called a "brush" or "miserable action," the Japanese trying to get at the Russian ships, and the latter reasonably enough clinging to the shelter of the forts. These latter distinctly saved the Russian fleet from destruction, and the Japanese, finding that there was no hope of getting the Russians into the open, withdrew after some 45 minutes' long-range firing. This firing was, however, very effective. In such a case the objective must be not to silence forts or battleships, but if possible to destroy some weaker ship which there is a reasonable chance of sinking with a single heavy projectile. The Russian cruisers, which, if they had been employed in scouting during the previous day and night, should have given due warning of the Japanese approach, were now pushed forward into the front part of the battle. The captain of the small cruiser Novik has been decorated for the prominent part he took. The Japanese seized the opportunity and directed their heavy guns on these ships. The best second-class cruiser at Port Arthur, the Askold, was seriously injured, and is now resting on the bottom of the basin in Port Arthur harbor, whilst the Diana and Novik were also considerably damaged. The battleship Poltava was reported to have sustained injuries on the waterline; but her vitals being protected by armor, it is probable that the damage will be easily repaired. None of the Japanese ships were seriously injured, which may be accounted for by the fact that they seem to have kept their unprotected cruisers out of range. The loss of men

on both sides was very small, and amounted to some 40 or 50 Japanese and 90 to 100 Russians.

Whilst these events were going forward at Port Arthur on Monday night and Tuesday morning, the Japanese made their raid on Chemulpo, 260 miles from Port Arthur. On Monday afternoon about 4 P. M. the Russian gunboat Koreitz, a ship of no fighting value, was proceeding down the channel that leads from Chemulpo anchorage to the sea, when she met some Japanese torpedo-boats (or destroyers?) escorting five transports. The Koreitz fired on the boats, and the latter retaliated with two torpedoes. Neither shells nor torpedoes took effect; and not only did fighting stop, but the Koreitz seems to have explained away the firing and the incident closed. This was nevertheless the opening of hostilities. Both sides claim to have been attacked, but the presumption is that the ship fired first. It was entirely contrary to the Japanese interests to sink such an unimportant ship as the Koreitz, whereas it was a reasonable thing for that ship to fire at any torpedo craft which she might suspect of attacking her. A Japanese gunboat was lying at Chemulpo, with four cruisers of different nations—British, French, Italian, and American respectively. There also lay the Variag, the fastest and best of the Russian second-class cruisers, a perfectly new vessel built in the United States, and having a speed of twenty-three knots. The transports were convoyed by four small Japanese cruisers, which were, according to some accounts, supported by the armored cruiser Asama. The Japanese at once proceeded with their task of landing the troops and stores, carrying out the work most systematically and rapidly, so that by midnight the men, numbering some 3,000, were all ashore. There is no evidence as to the attitude of the Russians; but they took no effective steps to impede the landing. Thus the night passed quietly, the Japanese gunboat having withdrawn to join her consorts, which had taken up a blockading position six miles off at the mouth of the Salee river, on which Chemulpo is situated. The next morning Admiral Uriu notified to the Russians that he was about to take warlike measures, and announced that if they did not leave the anchorage he should attack them as they lay. Captain Roudneff of the Variag decided to go out. The odds against him were heavy, but escape did not seem impossible. Each of the four Japanese cruisers, Takachicho, Naniwa, Suma, Akashi, are less than half the size and fighting power of the Variag, and some five knots slower. The gunboat Chiyoda was scarcely equal to the Koreitz. Newspaper reporters have stated that the Asama was also there; but the reports (apparently official) of the absence of casualties only mention the four small cruisers. Moreover, Alexieff's

report of sixteen Japanese ships at Port Arthur indicates that the Asama was there. The Asama being twice as powerful as the Variag, it would be natural for the former to surrender if her passage to the sea was barred by such a superior ship: this she did not do. She seems to have come boldly out to the entrance of the river (or channel), which has a navigable breadth of two to five miles according to the state of the tide. The Japanese squadron barred her way to the sea. Whether confident in her fighting powers or esteeming escape impossible, she apparently made no use of her speed, but entered into a long-range fight with the Japanese squadron. The fire of the latter was sufficiently heavy and accurate to crush the resistance of the Variag, and after some forty-five minutes, having lost forty-one killed and sixty-six wounded, but with engines and steering gear still serviceable, she turned and retreated to the anchorage. Her fire was so ineffective that the Japanese did not lose a man. For some unexplained reason Admiral Uriu does not seem to have compelled the Variag to surrender, and she was allowed to take up her anchorage once more amongst the foreign ships. Some three hours afterwards, the Variag's men having been removed by the neutral men-of-war, she was set on fire and scuttled by her crew. Whether Admiral Uriu had given some promise to consider the man-of-war anchorage at Chemulpo as neutral does not appear; but in the sinking of the Variag the Japanese lost a valuable prize, and it seems most unlikely that she can be raised, as she sank in deep water. The Koreitz took some little part in the action, but was scarcely fired at by the Japanese. She was scuttled with the Variag.

As to the material results of the fighting on the 8th and 9th, the Japanese, notwithstanding their notable successes, have not captured any ships. The Variag may be considered destroyed, and the cruiser Askold and battleship Retvizan are on the mud at Port Arthur. But the shallowness of that harbor bids fair to be the salvation of the Russian ships, and, as far as can be judged from the meagre information available, both these vessels may be serviceable in two or three months. If the Russian reports are to be believed, neither the Tsarevitch nor the Pallada were seriously injured by the torpedoes that struck them; and it is not to be supposed that either the Poltava, Diana, or Novik, which were damaged by Japanese shells on the 9th, will be unserviceable for more than three or four weeks. Of course much of this is mere surmise. No one can judge of the injuries to a ship without going on board and making a careful survey, nor can the time taken to make good her defects be estimated without a thorough knowledge of the repairing facilities available. The Russians have no

object to gain in publishing to the world the condition of their ships or the extent of their repairing facilities, and it is distinctly desirable that Japan should not know how long the disabled ships will be *hors de combat*. Thus we shall probably be in ignorance of what ships are and are not serviceable until the day arrives for them to come out again.*

But the *morale* of the Russian navy must have been severely shaken, and all history shows that this may be more difficult to repair than even the rent made by a big torpedo. Not only Admiral Alexieff but the Czar himself alludes most pointedly to the fact that the precious fortress of Port Arthur is safe. The very principle on which both Port Arthur and Vladivostock have been equipped is as harbors of refuge for sound ships that have had to run away. They bristle with guns, and are very badly provided with docks. Thus for a ship which has fought a successful battle, but has suffered severely, they do not afford facilities for getting to sea quickly. They are excellent for a beaten fleet that does not want to go to sea again; but even the most extreme admirers of the Fleet in Being would hardly consider such a fleet as that now at Port Arthur a serious bar to oversea military operations by the enemy. Unless Russia can put a check on Japan's transport and supply of troops, their fleet might as well have stayed in the Baltic.

Are there any lessons to be learnt from what has happened? Alexieff's error in leaving the Variag at Chemulpo, where the narrow waters made her speed useless, is patent enough. Again, ships which are not in harbor at night should not only be under way, but their position should be unknown to the enemy. If obliged to remain in a position where torpedo attack is probable, nets should be out. A fleet that does not know where the enemy is, and takes no steps to remedy this lack of knowledge, may expect to be surprised. The transport and landing of troops may be risky under certain circumstances, as, for example, when the command of the sea is not assured; but the risk may be worth taking. And we might add, it is obviously a mistake to detach valuable ships for the attack of commerce, when the enemy's commerce is not particularly essential to his welfare, es-

* At the moment of going to press reports are to hand of the attack on the Port Arthur ships by destroyers on Sunday the 14th. The flotilla was dispersed *en route*, and only two reached the harbor. (Perhaps something of the same kind happened on the 8th-9th.) The Japanese state that the Boyarin was hit. The Russians do not acknowledge any loss. The latter, of course, may wish to conceal their losses, but it seems more likely that the torpedoes may have missed. The courage shown by the attacking craft was most remarkable.

pecially when the ships thus detached might have been employed far better in making it difficult for the Japanese to carry troops across to Korea. If the four big cruisers at Vladivostock—the Gromboi, Rossiya, Rurik, and Bogatyr—go out a dozen times unharmed and capture or sink a tramp steamer every time, but get caught and destroyed the thirteenth time, the game will scarcely be found to have been worth the candle. With the arrival of the Italian-built cruisers Japan has now a squadron of eight armored cruisers, excellent craft for safeguarding the transport of troops and stores, though they lack speed to catch the Bogatyr, Bayan, and Askold. It is in this connection that the Variag would have been so valuable to them. The Japanese cannot increase their battleship or large cruiser force, for they cannot build at home nor buy abroad, and even small cruisers take a long time to build in Japan. Even if the Black Sea remains closed, the Russians will be able to send out two first-class battleships from the Baltic this summer, and in 1905 there will be another battleship and a ship of the Askold class to add to their Far East fleet, to say nothing of destroyers, torpedo craft, and possibly submarines. It therefore behooves Japan to push on with the war both afloat and ashore. What she needs is to capture as many ships as possible, or failing this, to destroy them—for the Port Arthur force does not appear to be incapacitated for very long. Especially it is needful to prevent the arrival of Russian reinforcements, also of material and machinery for the repair of the Port Arthur ships, which neutrals will be only too glad to deliver if it pays them well. The supersession of Admiral Starck shows that the Russians hope to do better under Makaroff. They will naturally strain every nerve to refit the ships at Port Arthur, and we may yet hear from their torpedo flotilla.

The opening moves of the war have disclosed the excellent organization and intelligence of the Japanese fleet, and the courage and skill of officers and men, whilst the Russians have started very badly. But it is a mistake to suppose that there is no redemption for the Russian navy. Japan has a hard task before her, and it cannot be expected that the blunders made in the first week of war will be continually repeated. The armies have yet to get to work, and it is on shore that the principal fighting must take place. Both ashore and afloat there is a long struggle to come. In any case many months, or even years, will elapse before we are likely to have peace again.

ACTIVE LIST.

*OUR TORPEDO-BOAT FLOTILLA.**

THE TRAINING NEEDED TO INSURE ITS EFFICIENCY.

MOTTO: *We question the utility of torpedo-boats because we don't know how to utilize them.*—W. W. KIMBALL.

BY LIEUTENANT EDWARD L. BEACH, U. S. Navy.

BY Navy Department General Order No. 49, of June 8, 1901, it is ordered that a torpedo-boat destroyer shall be commanded by a lieutenant, and that a torpedo-boat shall be commanded by a lieutenant, a lieutenant junior grade, or by an ensign. The Navy Regulations do not require that the officers ordered to torpedo-boat duty shall possess special knowledge, experience or training in such duty, indeed under the conditions that have existed for several years in the naval service such experience or training has been impossible to all but a limited few; it is well known that the need of officers for ships in commission has reduced all assignments to shore duty; one of the results of this has been that but few officers could be spared for torpedo instruction at Newport; another result is that but few of our torpedo-boats have been commissioned, and for much of the time all of them have been hauled out of water and laid up under conditions that caused great deterioration.

The great naval maneuvers of England, France, Russia, and Germany, which yearly hold place for the purpose of facing and solving the problems to be expected in actual warfare, have definitely determined that war squadrons should be, and most probably will be, composed of battleships, cruisers, and torpedo vessels. These countries have supplied themselves with the number of torpedo-boats demanded by their needs, and much intelligent practice with these weapons is exacted of officers and enlisted men.

From its great coastline and outlying colonies, so much of which is unfortified, and in war time under some circumstances would be inviting to hostile attack, the United States has great need of torpedo-boat defence.

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From the fact that the navies of these countries, against whom we are preparing to defend our country in the contingency of war, are equipped with great numbers of torpedo vessels, it must be expected that countries with naval bases near to our coasts and colonies would organize to be employed against us in time of war, squadrons of which torpedo-boats would form a part; we must be prepared for such features of warfare as the employment of these weapons would impose.

As the nation has determined upon a naval policy, it devolves upon naval officers to instruct the lawmakers of the particular features in technical respects of the best types of weapons, and the best means of using them. It is in this way that the knowledge of naval experts properly influences naval legislation. It is the belief of these experts that, considering the present and not trying to discount the future as to the value of the submarine or other possible weapons, the naval sea strength, that is the battle squadrons of a great power, should, as before stated, be composed of battleships, cruisers, and torpedo-boats.

To develop great efficiency in each class for its duties, and in the officers and men who handle them, the battleships for the first line of battle, the cruisers for scouting and other duties, the torpedo craft, when, under favoring circumstances they can be dispatched against the enemy, is the purpose of the great foreign yearly maneuvers. As used in this paper, the term torpedo-boat is generally applied to either the destroyer or the torpedo-boat proper.

The United States has a glorious naval history, much of which has been of single ship actions; the effect is seen in the efforts made in our service to perfect in fighting ability the units of our squadrons; of recent years the importance of squadron drills has become better recognized with practical results. But in all our naval policy since 1898 it is apparent that our building programme has been deficient in the construction of torpedo craft, as well as in the proper utilization of those that we already have.

All our ships of whatever type, when kept continually in commission, have within reasonable time attained to the most commendable conditions of efficiency. The ships laid up even in reserve with skeleton crews on board, have invariably deteriorated. The splendid Minneapolis after a short commission was put in reserve in Philadelphia; when called into service during the Spanish war she had deteriorated so badly that her boilers had to be retubed. This lesson is repeated every time a ship is laid up. When the Columbia was commissioned for a receiving ship a board of inquiry was called upon to investigate the causes of her bad condition. The torpedo-boat, which combines great powers of speed with greatest frailty, is the most susceptible of

all craft to deterioration; after the Spanish war it was impossible to keep these boats in commission because of the need for all officers and men that could be had, for service in Chinese and Philippine waters; and so all the torpedo-boats were hauled out of the water and laid up. The effect of this upon the navy was bad; the boats when again called into service were unfit for use until extensive repairs had been made. If the torpedo flotilla is to be one of our naval weapons, the very nature of the torpedo-boat, of its powers, of the hazardous duties it is to be employed upon, require that, to be successfully used, its officers and crew must have much drill at their proper duties. As for most of the time these boats have not been in commission, this necessary training has had but little place in our service.

It is the purpose of this paper to inquire into what is needed, first, to insure that at the required moment the offensive power of the boat may be equal to its designed power; and secondly, to insure that its destructive powers may be intelligently directed.

For the writer's convenience this subject will be discussed under the following headings: (1) The conditions that have controlled our torpedo-boat flotilla. (2) Lessons concerning torpedo craft to be drawn from history and from foreign maneuvers. (3) Foreign systems of torpedo-boat training. (4) The torpedo-boat training by our navy.

PART I.

The Conditions that Have Controlled Our Torpedo-Boat Flotilla.

Since the Spanish war our torpedo-boat flotilla has been largely augmented, and now consists (built and near completion) of twenty-six sea-going torpedo-boats and twenty torpedo-boat destroyers, with a number of smaller boats. The characteristics of these boats, the extremes of speed and destructive powers combined with ever-present vulnerability to overpowering accident from within and without, are well known to all naval officers. But is not this about all that is known of them to most of those officers who never have had experience with these craft?

One cannot dwell with satisfaction upon what, until recently, has been accomplished by our torpedo-boats in peace time; and in the Spanish war they were never in a single instance put to legitimate torpedo-boat work. The Spanish war proved not their destructiveness nor their war time utility, but demonstrated their inherent weakness. During this war the tendency was not to test them, but rather to pre-

serve them. This was so because there has not existed in this country, either in its legislators or in its naval officers, a well defined, well agreed upon, torpedo-boat policy, either of building, or of exercise with those already built. Naval experts all agree that the country that places any dependence at all upon torpedo-boats needs many of them. They do not admit that the number at present possessed by the United States nearly equals the number required by considerations of sufficient torpedo-boat defence. Believing as he does that in particular cases the torpedo-boat is invaluable to the national defence, and that for these cases our present torpedo-boat flotilla is not sufficient in numbers for such citable instances, the writer would urge the necessity the navy has of demonstrating its ability to utilize for their designed purpose these destructive engines of modern warfare. Until the navy shows that these weapons may be used against us, and also that in war's contingency we might with advantage use them against an enemy, it is not probable that the national legislators will order any more torpedo-boats to be built. During the discussion upon the last Naval Appropriation Bill the need of torpedo-boats was not considered. It is submitted that in case of conflict with any of the great naval powers that have bases near to our coasts or colonies, there will be need on our part of torpedo-boats, and that the country should be educated to this need. If the boats are to be hauled out of water and laid up, the country will not appreciate this need until the war is upon us, nor will the navy be trained to handle these boats efficiently.

The history of the torpedo-boat emphasizes in all cases its extreme vulnerability; the practical study of it by foreign navies has developed much knowledge of when and how and where this weapon should be used, knowledge which but a few of our officers have had an opportunity of acquiring. It is not enough that when on hostile destructive intent the boat should be capable of reproducing her trial trip speed; the knowledge of the proper use of the boat is just as necessary; this requires the practical study of the tactical operations of the boat in section; of what has been accomplished by torpedo-boats in previous wars, and in squadron during the great foreign maneuvers; and in each case the particular tactics employed.

Used with wisdom the torpedo-boat becomes a most powerful weapon; used without practical knowledge of torpedo-boat warfare, the torpedo-boats become useless for offence, and a weakness and hindrance to their own flag, as instanced by the Spanish destroyers, Furor, Pluton, and Terror, during the Spanish-American war.

We have had torpedo-boats for ten years, during which time we have battled on the seas with an European power, and yet, during this

time, at peace and at war, until most recently our officers have never had opportunity to exercise these boats under simulated war time conditions. Individual instances may be cited where boats that have been kept continually in commission have attained to a high standard of efficiency as regards their handling and their speeds; but with the exception of the section of boats once commanded by Lieutenant-Commander Kimball, and a later section commanded by Lieutenant Chandler, there has never been in our service, either in war or in peace, a strategical or tactical use of our torpedo-boats. The experts in torpedo-boat warfare all agree in declaring that to be successful the boats must operate in section; the conditions of success for the torpedo-boat section depend upon each boat being at the top-notch of efficiency. Where our torpedo-boat flotilla has been weak is that at no one time have many of our boats been in efficient condition, and but twice have we ever possessed an efficient torpedo-boat section. As successful torpedo-boat warfare must depend upon many efficient torpedo-boat sections, though we possess over fifty of such craft, and though we now have one most efficient torpedo-boat section, our actual torpedo-boat strength measured by what will be war time necessities, is to-day really and actually so small, that it could not be of much effect in bringing a war to a successful termination. This is so because it would take months of preparation to make seven or eight efficient torpedo-boat sections out of our present uncommissioned flotilla.

Let it never be forgotten that, unless their officers and crews are experienced in torpedo-boat duties, the possession of fifty odd craft does not in itself constitute torpedo-boat strength. It may not be necessary to keep constantly all fifty boats in full commission, but that our present torpedo-boat flotilla may be a formidable weapon in case of war, it is respectfully submitted that at all times, year in and year out, there should be some boats in full commission, constantly exercised in section, required not only to develop trial trip speeds, but also regularly to practice at approved torpedo-boat section tactics; and furthermore that those boats not kept in commission should have such constant attention, and be run so frequently, that at all times, except when undergoing repairs, they would be ready to be commissioned for offensive work.

The officers and crews attached to these boats should be subject to change after each had received a stated amount of experience with them, thus providing for a healthy interest, knowledge and experience in such duty throughout all branches in the naval service.

At the close of the war with Spain the torpedo-boats were put out

of commission, hauled out of water and laid up. When again called into commission at the close of 1900 it was found that the most extensive repairs were needed by them, and months were consumed in getting the flotilla ready for service. After being commissioned, although the crew of each boat had some opportunity of learning the special characteristics of its own boat, the highest speeds were rarely if ever attempted, nor was there anything in the nature of approved tactical maneuvers carried out. The mishaps were so constant and so many that each crew was at all times occupied with the interior affairs of its own boat. Real torpedo-boat service was not attempted, and it can hardly be claimed that the commissioning of these boats was of value to the naval service except by the demonstration of needed experience and much drill by those who are to handle them; the boats were so many different units which were not brought together for proper tactical work.

The actual results showed that the great speed powers placed in the boat were not to be developed except by crews drilled into excellence; to attain this excellence requires constant practice for an extended length of time. Another result burned into the minds of all who had to do with these boats was the certain deterioration that always happens to them when not receiving constant care and attention.

At times there has been much discussion in our service of torpedoes and of torpedo-boats, and but very little discussion of the training needed by those who handle these weapons. The purpose of this paper is to examine into the conditions that have prevailed within our torpedo-boat flotilla regarding its ability to perform effectively its designed duty, to inquire if there has been a lack of needed training on the navy's part to handle these weapons efficiently.

As delivered to the navy the torpedo-boat possesses the extremes of speed, destructive power and vulnerability. Sir William Laird Clowes has said in the Naval Institute Proceedings that the designed purpose and the legitimate duty of the torpedo-boat is "To strike like a bolt from the blue in the most unexpected quarters, to be always in perfect readiness for a few hours of rough, hard work under extreme pressure." The question to be asked is whether the average condition of the boats of our service has ever been such that one might with reasonable confidence of success dispatch them in war time to do their legitimate work. To answer this question, realizing that at times some boats have been kept in commendable states of efficiency, and that the recent work of the section of boats under the command of Lieutenant Chandler has proved that with opportunity our navy

can use these boats intelligently and efficiently for their designed purposes, it must be asseverated that, with the exception of the two sections previously mentioned, our torpedo-boat flotilla has never been in condition for effective work. Although individual boats have at times when long in commission reached commendable states of efficiency, it must be remembered that this is not the final test of their destructive ability. If every unit of our flotilla were in perfect condition, the flotilla would not yet be ready for war, because the torpedo-boat must act in concert with other boats, and much drill and practice is necessary to insure that this will be properly done. As our flotilla of fifty-three boats and destroyers exists to-day, there are but seven, comprising one section, that may be said to be ready for hostile attack. Many more boats could be got ready upon short notice, but officers and crews experienced in torpedo-boat duties could not be found for them; therefore with the exception of one section of seven boats it must be stated that our torpedo-boat flotilla is not in such condition that it could be dispatched in war time on its legitimate duty with reasonable chances of success.

If one examines the history of our torpedo-boats there is at all times evidence that the cause of this is primarily the lack of training in the navy for torpedo-boat work, lack of opportunity for officers and men to learn torpedo-boat duties, and absence of useful torpedo-boat tactical maneuvers during the short periods of time torpedo-boats have been kept in commission. The chief feature of the torpedo-boat is her speed, which is of prime necessity to enable the boat to get within striking distance of her prey before being discovered and destroyed; that this speed is essential to give the torpedo-boat a chance to escape after she has discharged her torpedoes is of secondary importance; the scope of the torpedo-boat's mission does not include consideration of possibilities of escape after the purpose has been accomplished; yet if the personnel of the boat are to be allowed hope of escape this must depend upon the boat's speed. Thus the possibilities of successful attack and subsequent escape all depend absolutely upon the capability of the boat for speed. All navies realize this, and therefore our boats have been designed with this quality in mind, and before delivery to the government the contractor is required by actual trial to prove the speed of the boat he has built.

Many such trials have been made not by the contractor's own workmen, but by an expert torpedo-boat engineer, who for the past eight years has devoted all of his time to superintending such trials; he has an expert crew that accompanies him. When engaged for the trial of some particular boat he devotes himself to drilling his crew

into perfect familiarity with the boat in hand, has as many full-powered trials as he judges his crew need, and upon the appointed day he superintends the contractor's trial to meet the government requirements; these trials have usually been successful. It must be remembered that the great speed developed upon such an occasion is the speed that will be actually necessary when the boat is dispatched upon hostile mission, and that without this speed the boat will be destroyed without having a chance to discharge her torpedoes; and all experience proves that this speed will never be developed except by a torpedo-boat crew each unit of which is an expert in his own particular duties.

Naval officers may, with satisfaction, remember that, under continuous commission, we have had boats capable of developing the speed attained on the contractor's trial trips; but where boats have been commissioned after having been laid up, the history is that before being ready for service they have always needed extensive repairs; furthermore, the boats were, with rare exceptions, never long enough in commission to permit the units of their crews to become thoroughly expert in individual duties, a fact well attested by the number of accidents incident to the early steaming of the boats, due sometimes to inexperience in handling the boat, and at other times to inexperience in manipulating the engines. This is not surprising; because a naval officer has been graduated from Annapolis and has had several years of watch and other duty, it does not necessarily follow that, when first ordered to torpedo-boat duty, he is as competent to command the torpedo-boat as is the officer who has already had much experience in such duty; nor are the members of the crew as efficient at first as they will be later in the performance of their duties; this though a truism may be pertinent, for it has been seldom that the officer ordered to command has had any previous experience with these craft; the records show that when a boat remains commissioned for some time the ills and misfortunes that always attend the early commissioning of these boats grow more and more infrequent.

The navy is weak in torpedo-boat experience because our boats have been so little used. Hitherto when the boats have been put into commission for the maneuvers, before the officers and crews had had sufficient experience to become expert, the maneuvers were over, and the boats were put out of commission, hauled out and laid up; as previously stated, although the boats are worthless for legitimate torpedo-boat duty unless capable of great speeds, during these short commissions there were too many break-downs at low speeds to justify many attempts at high speeds.

The foregoing remarks apply to the older boats; the faults pointed

out are not due to lack of proper spirit on the part of anybody, but partly because of the conditions that have existed in the service where there have not been nearly enough officers and men to supply the call from battle and cruising squadrons.

The last addition of these craft to our navy, of sixteen torpedo-boats and sixteen destroyers, are of the latest type, and are possessed of the greatest powers of their class. This addition makes our torpedo-boat flotilla of respectable size and power, although no one would claim that it is as yet sufficiently so for its purpose. But in recent national legislation there has been no apparent tendency to increase the number of torpedo craft.

It is apparent that in the maneuvers soon to be executed in the Caribbean Sea, torpedo-boats will have far greater place than in any previous operations of our navy; and it is probable that the need of many more boats for such maneuvers will be actually demonstrated; this would demand that many of both the commissioned and enlisted personnel receive special training, so that when the flotilla of boats is commissioned either for peace maneuvers of for war, its work will be creditable.

PART II.

Lessons Concerning Torpedo Craft to be Drawn from History and from the Great Foreign Maneuvers.

During the American Civil War the destructive possibilities of the torpedo received terrible illustration, and since then inventors and scientists have been engaged in perfecting this weapon. To-day the Whitehead torpedo is used by all navies, and the vessels carrying these torpedoes are all built much upon the same plans and considerations. The invention of the torpedo caused the construction of the special vessel to carry it. For many years there was constant study and practice to determine the needed characteristics of the torpedo vessel, and the present form of the torpedo vessel was naturally evolved with the perfection of the torpedo itself and the development of rapid-fire ordnance. The one who studies the history of the torpedo-boat must be greatly impressed by the effect which the great foreign yearly maneuvers had upon its development in size, speed, and number required. The first idea was that the boat should be small and speedy; the great development of small calibred guns made the extreme of speed of prime necessity; without it the boat would never be able to get near enough to the enemy to discharge her torpedoes. A condition early developed by the great naval maneuvers was the need of a vessel designed for the

special purpose of destroying torpedo-boats, and thus torpedo-boat catchers of various types were built; following maneuvers proved that all of these types were unsatisfactory, yet in their short-comings was seen the needed characteristics of the boat which was to suppress the torpedo-boat; as a result the torpedo-boat destroyer was built and tried, and has proved to be the instrument needed, and to-day all navies are being provided with torpedo vessels of this class. The development of this weapon has created new problems in warfare, conditions which modern naval commanders must be familiar with, and conditions which are as yet by many officers but imperfectly understood. The foreign naval maneuvers have contributed largely to the development of torpedo vessels, and we have accepted the results of these maneuvers and are building our torpedo craft on the lines indicated by them as necessary. Until the present time we have never had any maneuvers in which the operations of torpedo craft presented any problems or conditions or had the slightest effect. In the British maneuvers of 1901 sixty destroyers and twenty torpedo-boats took part and were in constant activity. The action of these torpedo vessels presented conditions and problems the like of which has never been seen in our navy; foreign navies are prepared to use torpedo-boats in action, and they have studied the best methods of using them strategically and tactically, and of suppressing and repulsing hostile boats. As an offset to this, what have we done? Are we to go on, "hoping that when the time comes to beat an enemy we shall be ready and able to do so by the gift of God which comes to us by steady advancement through the grades of the service?" Maneuvers and torpedo-boat operations have as yet been almost impossible to our service; they will come later; but it is possible to study the foreign maneuvers and to apply some of the lessons there learned to the needs of our own service. In what follows the writer has attempted to quote what was the accepted lesson at the time of torpedo-boat operations, in war and in foreign maneuvers. The views that were expressed at the time are given; some were to be modified by subsequent teachings, some to be repeatedly accentuated. Though there are many officers familiar with the lessons that history and the great peace maneuvers have taught, torpedo-boat operations have been so limited in the past, and are to be so important to us in the future, that it is hoped that the summarizing in one paper of previous torpedo-boat teachings may be of some service. It is not claimed that the views here recorded have other weight than is naturally accorded to capable observers, but it is maintained that these views are those of experts, and that when uttered they were received as correct upon the subject of torpedo-boat operations.

It is held that the purpose of the torpedo-boat is, by operating from a base or shelter, to make hostile attacks upon the enemy's ships; and that the purpose of a destroyer is, in addition to its character as a torpedo-boat, to prevent torpedo-boat attack, to destroy and suppress torpedo-boats, to blockade torpedo-boats, to accompany squadrons to sea, and to keep up with them at high speeds in all weathers for long distances.

We have made but little use of our torpedo-boats either in war or in the few peace maneuvers we have had, but we now have a large number of such craft, and we have officers and men enthusiastic of their possibilities; as real earnest, intelligent use of them is almost new to all but a few of us, let us see how we can apply to our own circumstances the lessons that have been learned concerning them.

The real conclusive lesson will be taught only when great powers war; still the torpedoes have been used in little wars, and from these we may learn something; and the foreign maneuvers have developed much knowledge concerning torpedo-boat operations and dispositions.

THE CHILIAN REVOLUTION OF 1891.

The torpedo-boat in its present modern form was first used in hostile attack on April 23, 1891, when the Chilian government vessels, Lynch and Condell, attacked with their torpedoes the Revolutionary vessels in Caldera Bay; five torpedoes were discharged, only one of which struck its target; this one sunk the Blanca Encalada. The official report of this action said that the lessons this taught were:

"The difficulty of effectively using the Whitehead torpedo save when it is in the hands of people thoroughly familiar with it, and the untrustworthiness of the human element in torpedo warfare.—The usefulness of the Whitehead torpedo when properly employed.—To use any torpedo effectively, even in peace time, requires not only coolness and self-command, but also great carefulness, and, above all, training."

Target practice with the Whitehead torpedo as then supplied, everywhere proved the uncertainty of the direction that the torpedo would take after launching; that one out of five torpedoes discharged should hit its target was at that time to be considered good torpedo marksmanship; during our recent maneuvers the torpedo-boat section commanded by Lieutenant Chandler, running at full speed, discharged fourteen torpedoes, twelve of which struck their targets. The invention of the gyroscope has converted the torpedo from a weapon of most uncertain aim to one of gun precision. The certainty of aim

with which the torpedo can now be discharged bespeaks for it a far greater field than when, ten years ago, it was so uncertain.

THE CHINESE-JAPANESE WAR, 1894.

The great lesson to be drawn from the torpedo-boat operations of this war is the utter worthlessness in accomplishing results of the weapon when operated by untrained crews. At no one time were the boats operated with the best strategical or tactical considerations. At the battle of Yalu, on September 17, 1894, there were no Japanese torpedo-boats, and the Chinese boats present, if there were any, took no part in the fight. At Wei-Hai-Wei the position of the Japanese invited torpedo-boat attack, but none was made upon it. Here, on January 30, 1895, sixteen Japanese torpedo-boats attacked the Chinese fleet, but failed in accomplishing anything. Later, on February 5, these boats repeated the attack upon the Chinese fleet, then crippled and disheartened, and sunk several ships.

THE BRAZILIAN REVOLT OF 1893-94.

During this conflict torpedo-boat operations had place but once, which was at the close of the revolt. Two separate attacks were made by four government torpedo vessels upon the Aquidaban, on the nights of April 4 and April 5, 1894. On the second night one of the four torpedoes discharged struck and sunk the Aquidaban.

THE SPANISH-AMERICAN WAR OF 1898.

There were no torpedo-boat operations worthy the name in this short war. The American boats were used for everything except torpedo-boat work. Apparently the Spaniards had not the faintest conception of the proper use of their destroyers, which were at all times a positive hindrance. In action they were vanquished by a converted American yacht. The attempted attack of the Terror upon the St. Paul was made in the greatest ignorance, and of necessity ended in disaster.

Let us turn from the limited torpedo-boat operations in warfare to what has been done in the great naval maneuvers.

The tremendous possibilities of the torpedo-boat has for years appealed to naval minds, and in the evolution of the type it is interesting and instructive, from the point of view of present knowledge, to examine into the expressions of those who had to do with the weapon in its earlier days.

A French student whose views were widely read and discussed wrote in L'Année Maritime, in 1882, that:

"A condition essential to the success of these weapons is that they should be maneuvered by bold, well-disciplined crews, free from liability to panic, and composed of men resolutely determined to sacrifice their lives if necessary."

Some features of the torpedo-boat have undergone much development, but the character of the men who are to man them must always be of the nature just quoted; this is accentuated by every employment the weapon has ever had, in peace and in war.

In July, 1879, in the Revue Maritime, Lieutenant Chaubaud-Arnault, of the French Navy, presented a paper on the subject of "The Employment of Torpedoes in Boats Against Ships." One of the views presented in this paper, drawn from a study of all previous torpedo-boat operations, is:

"An attack attempted by night or day by a well-constructed torpedo-boat presents no exceptional dangers either for the boat or the crew."

This most remarkable statement, which to-day is absolutely untenable, is a forcible illustration of the great development of the torpedo-boat and of the means of repelling torpedo-boat attack. In present times attacks from torpedo-boats would never be attempted by day by experienced officers, and an attack by night by single boat would be made only as a last despairing attempt, almost hopeless of success, and entirely hopeless of returning whole from the attack except if the enemy be entirely unprepared.

In Vol. VII, No. IV, of the Mittheilungen aus dem Gebiete des Seewesens, is found the report by Lieutenant Witheft, of the Russian Navy, of the results accomplished at the Russian Naval Torpedo School in 1879. Throughout the summer of 1879 twelve Russian torpedo-boats in full commission had been constantly exercised for the purpose of studying and developing the best methods of handling torpedo-boats. The following were among the conclusions reached:

"Boats must be manned by men trained to the hazardous duties expected of them."

"The torpedo and the torpedo-boat should form a single weapon, so that the attention of the officers in command may never be divided between the conducting of the boat and the handling of the weapon."

"Every division of torpedo-boats should be trained to conduct an attack without the support or co-operation of any other naval arm."

"In the Russo-Turkish war almost every attack was successful when undertaken according to a well-matured plan by a group of boats, and no attack succeeded which was made by a single boat."

"Attacks by single boats are only to be attempted as a last resource."

"The attack must be made according to a carefully considered plan."

"The attacks should be made at a signal from the officer in command, simultaneously from several points."

"In order to be able to apply all these rules effectively in war, it is necessary in time of peace to train every torpedo division to act as much as possible under the conditions which would arise in actual warfare. It is only after much practice that success can be obtained in this new method of warfare. Trials with single boats can only be regarded as preliminary to maneuvers with a whole division. The only way to insure success when a boat is for the first time attached to a division is constant practice in making attacks of a similar nature in time of peace."

In an essay by Commander Hayes, of the British Navy, published in the Journal of the United Service Institution, Vol. XXII, 1878, it is said:

"Torpedo-boats attacking a ship at anchor will probably have to oppose two lines of obstructions, and to engage other torpedo and guard boats; they would also be exposed to a severe fire from rifles, Gatlings, grape, and case, directed by the aid of the electric light; therefore torpedo-boats should attack in numbers and from different quarters."

In a speech in the British House of Commons, in 1877, Commander Lord Charles Beresford said:

"If three or four boats of great speed attacked a ship from different points of the compass, the ship was doomed to destruction. Great Britain might build enormously powerful ships, but torpedoes must be the order of the day."

In his report of 1878-79 Admiral Porter said:

"The history of torpedoes shows a large proportion of failures and the destruction or imminent risk of the boats employed."

In presenting these views of early torpedo-boat students, the writer does not offer them as possessing any peculiar sanctity nor value, except as they applied at the time they were written.

But it is interesting and instructive to know the influences upon our predecessors in torpedo-boats, and where we find certain principles, the truth, the pertinence, necessity, and value of which are constantly and increasingly accentuated, we may with profit study them and apply them to our own circumstances.

Let us follow the history of torpedo-boats in the yearly maneuvers of the great naval powers.

In the British naval maneuvers of 1885, twenty-five torpedo-boats took part. That part of the report which concerns these boats states that about half of these became disabled during the passage from their home ports to the scenes of the operations; a great action was planned in which these boats were to have a prominent part in the attack; the report of the attack says that these torpedo-boats seemed to be uncontrollable; many collisions occurred, machinery mishaps, and breakdowns of disabling nature were more than frequent, and when the order for the attack was given but few of the twenty-five boats could take part. The judges reported their opinion of these torpedo-boats to be that in their condition and as they were handled, the torpedo-boats could not have succeeded in any attack.

In 1885 Lieutenant Leroy, of the French Navy, brought a section of torpedo-boats from Brest to Toulon; in his report to the Ministry of Marine of this passage he says:

"That which is wearying on board a torpedo-boat, and is extremely trying to a sensitive, nervous system, is the continual vibration and racing of the engines with a violence which almost suggests that the engine must come to pieces. The strain is moral rather than physical, but it tells upon the whole system; after a short time, however, one grows used to it. With the engines all was satisfactory; the engineers were accustomed to torpedo-boats. They were men who had training at Brest. It is absolutely necessary that the crew of a torpedo-boat should be thoroughly accustomed to this class of vessel."—(Brassey's Annual, 1886).

In Brassey's Annual of 1887, a writer criticising the torpedo-boat work of the previous maneuvers, says:

"The introduction of the torpedo, the torpedo-boat, and the torpedo-boat catcher, calls for the creation of a special service for the efficient manning of the coast defence flotilla. A school of training for this purpose is not less necessary than a school of gunnery."

Torpedo-boats took a prominent part in the French naval maneuvers of 1886. A very prominent illustration of the character of their service is shown by the difference between the first and the last reports. We find at first that a short cruise of 27 hours so completely used up the crews of these boats that they were reported to be completely unfit for duty.

Some months later these same crews were found to be able to handle their boats for weeks at a time, in even worse weather, without exhaustion. The lesson here portrayed has been emphasized by the history of every torpedo-boat that has ever been put into service. Exhausting though torpedo-boat work is, with a few months of train-

ing the crews can accustom themselves to the physical demands upon them without overstraining themselves. In these maneuvers off Toulon, torpedo-boats at first made themselves notorious because of the number of boats that were sunk by avoidable collisions; also the machinery mishaps were so many that no boat could be depended upon to execute a signal. In an attack upon a hostile fleet that appeared off Ajaccio, of twenty torpedo-boats that were formed for attack but six were in condition for service. Later, at the same place, a fleet of thirteen boats, the slowest of which had made over a trial course a speed of twenty knots, sallied out to attack a hostile squadron, which, after seeing the fleet of boats start out, steamed away at a speed of 11½ knots; the fleet of torpedo-boats was not able to catch up to this squadron. After some months of work the troubles that had early beset these boats had mostly disappeared, and the boats were found to be capable of effective service. In the report concerning these torpedo-boat operations is found the following significant statement:

"The experience gained during two months of constant torpedo-boat work was noticeable in the increased skill and endurance shown by the crews of all the boats."

"A special class of men must be trained for service in torpedo-boats, for, with increased experience in the crew, the increased efficiency of the boat is very marked" (Brassey's Annual, 1887).

It is certain that, if our boats are to be commissioned only when war breaks out, nothing but misfortune and disaster will attend them; they will surely suppress themselves without harming the enemy; it is too much to hope that there will be any possibility of practice with them after the declaration of war. To be of any service the boats and crews must be drilled beforehand, must be ready to face the problems and conditions that war brings. All experience shows that torpedo-boats put into service without drill can never accomplish anything, while the possession of numerous well-drilled boats will prevent a possible enemy from ever attempting to sight our shores.

The French navy learned this lesson so well that, previous to their maneuvers of 1888, forty torpedo-boats with crews numbering 1,722 men were kept in commission for a year. The work done by torpedo-boats during these maneuvers was not entirely satisfactory, but it was a great improvement over what had been done previously. In the French maneuvers of 1889, the record of the torpedo-boats was marred by collisions with other boats and by machinery mishaps; it was reported that in all of such cases these troubles occurred to boats whose crews had had no torpedo-boat training, and that they were caused by inexperience. The great lesson learned by the French from these man-

euvers was the necessity of previous drill at torpedo-boat tactics; before this each section-commander had used his boats according to his own particular judgment, the best methods of handling a number of boats acting together had not received much study, and the necessity of tactics was but dimly appreciated; there being no well-developed agreed-upon system of tactics; each commander used his boats in an attack with but little knowledge of the best methods; confusion always occurred, the attacks were rarely successful, and the boats suffered terribly. The certainty of success by the German method of attack, as recently shown by Lientenant Chandler, is an illustration of what has been accomplished in the methods of using this weapon by constant study and practice with it. In 1889, there was much difference of opinion of when and how and where this weapon should be used; every year's work since then has thrown light upon this subject, and the yearly operations have worked out many torpedo-boat problems.

The following is an extract from the report to the British Admiralty of the naval maneuvers of 1888 (Brassey's Annual, 1889):

"Torpedo-boats would be of far more use to the blockaded squadrons than to the blockaders. Torpedo-boats, if not capable of keeping the sea independently under all conditions of weather, would inevitably prove a cause of embarrassment and anxiety to an admiral commanding a blockading fleet, and would be subject to endless casualties."

"The employment of torpedo-boats as an inner line of blockade is not desirable, they being calculated to cause much confusion and embarrassment to their friends; they are admirably adapted for purposes of defence; but even then without a very simple and perfect system of signals they are liable to be mistaken for enemies by their own side. This occurred once at least on each side during the 1888 maneuvers."

The following is an extract from the parliamentary report of the British maneuvers of 1890:

"The radius of action of a torpedo-boat is limited less by her coal and feed water supply than by the physical endurance of her crew, especially her commander" (Brassey's Annual, 1891).

Criticising these same maneuvers, a writer in Engineering, in 1890, said:

"We now come to the principal lesson from the naval point of view, and that is the great value for training purposes such service has to young officers whose future will be entirely cast in steam vessels. It would appear in every way desirable that a certain period in a torpedo-boat should be an essential part of a naval education. To carry this into effect a proportion of the boats should always be kept in commission at the various ports, the remainder to be kept in reserve,

and to replace periodically those which require refit or repair" (Brassey's Annual, 1891).

Writing in Le Yacht of these same maneuvers, the well-known French critic, M. Wehl, said:

"The English maneuvers have shown once more that torpedo-boats well handled are formidable weapons at a small distance from the shore."

THE BRITISH NAVAL MANEUVERS OF 1891.

These are the most important maneuvers as regards torpedo-boats that have ever taken place. The British Admiralty announced to the squadrons mobilized for the maneuvers the following tasks:

"(*a*) To ascertain the tactics which would probably be adopted by flotillas of torpedo-boats stationed at several points on one shore of a channel in order to harass or destroy an enemy's ships on the other side."

"(*b*) To ascertain the measures which should be taken to give security against the attacks of these torpedo-boats."

Discussing the results of these maneuvers the well-known naval critic, Mr. Thursfield, wrote in the Quarterly Review of April, 1892:

"The bases assigned to the torpedo-boats on this occasion were the Irish ports of St. George's Channel. Their objective was a small squadron of ironclads with cruisers and torpedo-gunboats under Captain Long, with his base at Milford Haven, and a freedom of range throughout the area accessible to the hostile torpedo-boats. Captain Long, himself a torpedo expert of great experience and capacity, resolved to make his defence an active rather than a passive one, that is, instead of entrenching himself behind such fixed and mobile defences as are available when a squadron remains at its anchorage, and waiting for torpedo-boats to attack him, he went himself to attack the torpedo-boats. The result abundantly justified the tactics employed. In no one single instance during the operations was a torpedo-boat successful in its attack on an ironclad. Of the twenty boats engaged, four were adjudged to have been captured, while seventeen separate attacks delivered by the remainder were adjudged to have resulted in the temporary disablement of the boats engaged. Besides this, two of the protecting ships attached to the torpedo-boat bases were destroyed by Captain Long, and the end of the operations left him completely master of the situation."

These 1891 maneuvers are of especial interest to the student of torpedo-boat warfare because they were, by intent and in act, a direct

duel between torpedo-boats and an attacking squadron. Of this, Mr. Thursfield wrote in Brassey's Annual, 1893:

"The object of the torpedo-boats was to harass the squadron, to impede its operations, and to destroy it if possible; while the object of the squadron was, by clearing the sea of torpedo-boats, to recover its freedom of operation, and, in the meanwhile, to take effective measures for its defence against their attack."

The striking lesson taught by these operations is that the best defence against expected torpedo-boat attack is made by assuming the offensive against them, and until in readiness for such offensive action, to keep out of the torpedo-boat's radius of action. If the torpedo-boats are not met with, the squadron should destroy if possible the bases of the torpedo-boats; this will effectively suppress the boats; if these bases are ports that cannot be destroyed, the squadron watching outside will be sure to catch some of the boats attempting to run the blockade, for the torpedo-boat must have frequent recourse to its base. All war maneuvers have proved that it is almost impossible for torpedo-boats to find an enemy's ships that are somewhere at large upon the sea, and also that a squadron can surely find the hostile torpedo-boats by watching their bases; this insures the suppression of the boats though it invites attack from them. In the maneuvers of 1890 a squadron anchored at a distance of over 100 miles from where there was known to be torpedo-boats; a night attack was made by the latter and four great battleships were destroyed; in the operations of the next year the squadron was constantly on the move, searching for the boats, well prepared for the attack which it invited; seventeen different attacks were made upon it, with the result of the destruction of all of the boats making the attacks, the squadron being entirely uninjured; the report concerning the torpedo-boat operations of these 1891 maneuvers was (Brassey's Annual, 1893):

"A torpedo-boat attack to be successful must be in the nature of a surprise. The torpedo-boat has a wider range of offensive action than was before believed. Properly handled, torpedo-boat attack may always be frustrated by torpedo-boat destroyers."

In 1890 the torpedo was most uncertain in its aim, the boats were slow compared with those of to-day, the vaguest ideas of best methods of using the boats existed, and yet, though always made in the greatest of confusion, torpedo-boat attacks sometimes were terribly destructive. Since then the torpedo has become a weapon of precision, the speeds of the boats approach thirty knots; modern warships are specially prepared to repel successfully torpedo-boat attack; all of this impera-

tively demands from our officers and men a knowledge of these new features of naval warfare.

The British naval maneuvers of 1892 continued the investigation of problems of torpedo-boat warfare. Here the particular problem was to investigate the effect of torpedo-boat menace or attack under different circumstances.

Two squadrons of the same flag were to meet and effect a juncture in narrow waters; between them was a powerful hostile squadron, accompanied by a formidable force of torpedo-boats. Criticising these operations, in Brassey's Annual for 1893, Mr. Thursfield said the operations showed that:

"The dreaded torpedo-boat can be completely neutralized by a tactical menace analogous to that which it exerts itself; its own menace is nevertheless so potent within its effective sphere of operations as to interpose impediment to the free movements of the immensely powerful squadrons which might completely frustrate the combinations and defeat the purposes of a deep-laid plan of campaign. The security of a cruising fleet at night against the attack of torpedo-boats in waters open to their operations lies in its constant movement at a speed and in directions not known to the enemy in search of it. It is certain that the menace of the torpedo-boat operates with immense effect on the cruising fleet. No one who realizes the immense importance of time in the operations of modern warfare will think it a small matter that the junction of two fleets immensely superior to the adversary opposed to them was delayed for forty-eight hours by the comparatively insignificant force of twenty-one torpedo-boats, and that this effect was produced although the torpedo-boats never succeeded in destroying a single one of their adversaries."

Torpedo-boat operations formed a part of the French maneuvers of 1892; it is reported that the great lesson taught by them was:

"The absolute inefficiency of torpedo-boats as auxiliaries to a seagoing iron-clad squadron" (Brassey's Annual, 1893).

Both the French and Russian maneuvers of 1891 consisted of attacks by hostile squadrons upon the coast defences, among the latter being many torpedo-boats. The lesson taught by these operations was the intimidating effect upon an admiral by the presence of hostile torpedo-boats. The apprehensive watching for them proved to be the most wearing strain that had ever been imposed upon the officers and crews of these ships. A few days of it used them up. If this is so in peace maneuvers, what is to be expected in war? If it be imperative that a squadron gain foothold on a hostile shore, the torpedo-boats of the latter must first be suppressed, and all experience shows

that the squadron should assume the offensive against them rather than wait for attack; these maneuvers again proved that, though the torpedo-boat under proper convoy can make long voyages, in war time it is not a sea-going instrument of naval warfare.

As these yearly maneuvers proceeded, it is seen that each year questions concerning the possibilities of torpedo-boats and the best means of repelling attacks from them formed the great problem; on the part of Great Britain we always find great squadrons opposed to each other, and great numbers of torpedo vessels present. The simulated conditions generally are those of Great Britain opposing the combined forces of France and Russia. Great Britain is more powerful in battleships and cruisers, while France and Russia possess a far greater number of torpedo-boats. Naturally the purpose of many of the foreign maneuvers has been to decide to what extent the opposing superior force of torpedo-boats counterbalances the inferiority in fighting ships. In investigating this question all sorts of problems connected with torpedo-boats have been met with, and much knowledge has been gained which we can apply to our own necessities.

Many of the French and Russian maneuvers consisted in attacks upon their coast by superior squadrons, to be opposed by inferior squadrons accompanied by great numbers of torpedo-boats.

In the British maneuvers of 1893, two powerful fleets in a narrow channel were opposed by a slightly inferior fleet, but which possessed a far greater force of torpedo-boats. The particular question laid down by the Admiralty was to ascertain to what extent this great superiority in torpedo-boats redressed the slight inferiority in fighting ships. During these operations there were fleet actions and constant torpedo-boat attack. The latter were handled by determined officers and experienced crews, ambitious to prove the decisive value of the torpedo-boat as a weapon; they properly took great chances. As a result of all of these torpedo-boat attacks, one battleship and four cruisers were sunk, but this was at a cost of five cruisers and twenty-seven torpedo-boats, in five and a half days. The results of these operations are summed up in Brassey's Annual, 1894, by Mr. Thursfield, as follows:

"Thus the continued experience of three years' maneuvers, those of 1891, 1892, and 1893, would seem to show that the sea-going torpedo-boat is an overrated weapon of defence. In 1891, the late Admiral Long showed 'that an active defence, adequately organized and skilfully disposed, must in the end completely neutralize the offensive capacity of the torpedo-boat.' This demonstration was reinforced by the maneuvers of 1892, which also showed further that the extinction

of the torpedo-boat menace follows immediately on the destruction of the shelter provided for the hostile torpedo-boats, and on the surrender of the sea-going squadron to which they are attached as auxiliaries. Lastly, the maneuvers of 1893 completed the demonstration, showing that, even in default of an active defence adequately organized and skilfully disposed, torpedo-boats are very apt to suppress themselves and to attain a very high rate of extinction in the normal course of their attacks on a powerful and vigilant sea-going adversary. The truth seems to be that a torpedo-boat ought properly to be regarded not as an independent sea-going unit of naval force, but as a peculiar and very destructive kind of projectile with a very extreme range which varies according to circumstances, but is by no means unlimited in any circumstances, and with an intelligent power of altering its direction in the course of its flight, but also with a considerable liability to be destroyed or intercepted before it attains its mark. As such its menace is tremendous, and its influence upon all strategic dispositions within its range is dominant and decisive so long as its menace is unabated. But experience, now repeatedly tested in our own and other navies under conditions as closely analogous to actual warfare as peace maneuvers can be made to afford, would seem to have shown that its strategic menace is far more formidable than its real offensive capacity, and that regarded as a projectile it is endowed with a really remarkable capacity for hitting wide of the mark, and destroying itself before it has delivered its blow, to say nothing of its very awkward habit of occasionally mistaking a friend for an enemy."

THE BRITISH NAVAL MANEUVERS OF 1894.

The following is an extract from the official report made of these maneuvers. It is found in Brassey's Annual, 1895.

"The torpedo-boat operations were upon a too restricted scale to supply much valuable instruction, but, as far as they went, they tend to confirm the view that the most effective employment of the torpedo-boat in war will be limited to sending her to attack an enemy's ship in a known position within the torpedo-boat's range of action, and that the whereabouts of the enemy must first be ascertained and communicated to the commander of the boat."

"The necessity of combining with torpedo-boats, vessels of other and larger classes to scout and discover an enemy, where exact information as to his position cannot be obtained by other means, seems to be established, and if so, it carries with it the obligation to consider a mere flotilla of torpedo-boats by themselves as a belligerent factor of distinctly imperfect efficiency."

The effect of these maneuvers was to make the British naval officer more familiar with the limitations of torpedo-boats. It has been repeatedly demonstrated that unless the torpedo-boat knows just where to find the enemy it will probably miss him. Torpedo-boat attack can be successful only in the darkness of night, and for the boat, time is a most important factor. These boats have repeatedly mistaken friends for foes with disastrous results to their own side.

THE BRITISH NAVAL MANEUVERS OF 1895.

The maneuvers of 1891, 1892, 1893, and 1894, dealt mainly with strategical questions; in these years torpedo vessels were assigned most prominent parts; in some of these maneuvers the main problem proposed concerned the proper disposition and use of torpedo-boats. During these operations the need of tactical torpedo-boat exercises became more apparent each year, and as a result the maneuvers of 1895 were entirely tactical in nature. The torpedo-boat squadron was organized, and the boats comprising it carried out the following tactical maneuvers (Brassey's Annual, 1896):

(1) Ordinary cruising at various speeds with tactics, to accustom officers and men to the handling of their vessels and boats and their armaments.

(2) Spreading for scouting work and reforming.

(3) Target practice at high speeds and special targets.

(4) Torpedo practice at high speeds.

(5) Tests of capabilities of destroyers in blockading torpedo-boats.

(6) To ascertain how far the best torpedo-boats could prevent modern ships of war from using a channel with the opposite coast in the enemy's hands, and the value of destroyers as a protection to such ships.

(7) To ascertain to what extent it would be desirable to use destroyers as sea-going boats.

THE BRITISH NAVAL MANEUVERS OF 1899.

One of the objects of these maneuvers was announced to be:

"To obtain information relative to the workings of destroyers and torpedo-boats."

Twenty-eight destroyers were assigned to one of the fleets and twenty-four torpedo-boats were assigned to the opposing fleet.

The results of these maneuvers are summed up in Brassey's Annual of 1900, as follows:

"The chances of a torpedo-boat finding a single ship or even a fleet in the course of a roving search have been proved over and over again in maneuvers to be exceedingly small, and they are reduced almost to zero by the presence of a vigilant and active flotilla of destroyers within the area of search."

In these maneuvers the squadron that was the inferior persistently avoided action and its opposing squadron could not find it. It was held that during the maneuvers the torpedo craft were not strategically placed, and no great lesson concerning them was to be drawn from these operations.

THE BRITISH NAVAL MANEUVERS OF 1900.

One of the three objects of these maneuvers was announced by the Admiralty to be to obtain information relating to:

"The power which cruisers may or may not possess of hunting down and driving torpedo craft into port."

The following are extracts from a criticism of these operations, to be found in Brassey's Annual, 1901:

"The destroyers proved singularly useful as scouts for certain purposes, such as the examination of the enemy's anchorages and possible shelter places, and as fast messengers. As a menace the destroyer is exceedingly formidable, indeed against torpedo-boats its menace is little short of a positive deterrent; as a messenger and for certain purposes as a scout, it is within certain limits almost invaluable."

THE BRITISH NAVAL MANEUVERS OF 1901.

These were the first maneuvers in which many destroyers were assigned to each of the opposing squadrons. One of these squadrons was composed of twelve battleships, twenty-five cruisers, thirty-two destroyers, and ten torpedo-boats. The opposing squadron was composed of eight battleships, twenty-four cruisers, twenty-eight destroyers, and ten torpedo-boats. The number and the power of the torpedo craft engaged in these operations illustrates the increasing importance attached to this weapon in naval operations. These torpedo craft were in full and constant activity, attacking and eluding ships. Mr. Thursfield criticises these operations in Brassey's Annual, 1902, as follows:

"Of the maneuvers as a whole it may be said without hesitation that they were full of pregnant instruction and fuller still of not less significant warning. The question was asked in The Times at the close of the maneuvers, 'Have we nothing to learn about the art of scouting, about the strategic planning of a campaign, about the true relation of the destroyer to the battleship, alike in attack and in defence, in a

word about the training of the naval officer for battle?' In the handling of destroyers and other torpedo craft, again, it cannot be denied that our admirals and senior officers have a great deal to learn. They must make up their minds as to what these vessels can do and what they cannot, how they can be employed to the best advantage, whether they are to be scouts, or commerce destroyers, or torpedo craft proper. Above all they must learn to establish some rational relation between the menace they can properly exert and the injury they are likely to inflict. It is hardly too much to say that the menace of the torpedo craft opposed to him was at the bottom of all Admiral Noel's dispositions, and indirectly the cause of his discomfiture. The actual injury they inflicted upon him was the loss of a single second-class cruiser. On the other hand, it is not perhaps hazardous to conjecture that the employment by Admiral Wilson of his destroyers in the rather burlesque performance of pretending to 'stop the trade,' was the veil of a crafty tactical purpose. By keeping them behind him he prevented their attacking him by mistake, and could safely open fire on any destroyer he saw, with little or no fear of her turning out to be a friend. But this is as much as to say that the destroyer as an element of naval force has not yet been co-ordinated with other elements, a practical proof that the true relation of the destroyer to the sea-going ship has not yet been determined. There is perhaps no outstanding problem of naval organization and tactics which presses more urgently for solution than this, none of which the solution is fraught with larger or more momentous consequences."

PART III.

Torpedo-Training in Foreign Navies.

Torpedo instruction in the British Navy.

The following is learned from the publication entitled:

"Course of instruction of officers and men in the torpedo schools. By authority of the Lords Commissioners of the Admiralty."

The instruction in torpedoes and torpedo-boats in the British Navy is most elaborate. It includes seven different courses for commissioned officers, four for warrant officers, nine for artificers of various grades, four for petty-officers, and two for seamen.

These seven courses for officers are as follows: The first course is the "Special full pay torpedo course." It is for officers who have already qualified as gunnery or torpedo lieutenants. It is an advanced course for officers who have been especially selected to take it. This course of instruction lasts for sixty-five working days, twenty-five of

which are completed before the yearly maneuvers and forty after them.

The first twenty-five days is devoted to what is known as the "Whitehead Course." This is subdivided into two parts, the first part of seven days is devoted to theory, and the second part of eighteen days is devoted to practice. The mornings of these first seven days are spent in hearing lectures on the torpedo armaments of vessels in the navy, and on torpedo mechanism. The afternoons following these lectures are spent in making the various adjustments to the torpedo mechanism to prepare the torpedo for a run. After these seven days comes the practical course of eighteen days, which consists of running torpedo-boats and destroyers, exercising them in different ways, with constant torpedo target-practice at moving targets, combined with practice at such tactical maneuvers as would be used with these craft in war time.

After this Whitehead Course it is probable that many of the officers taking it command the torpedo craft that take part in each year's maneuvers.

At the conclusion of the maneuvers the second part of this "Special full pay torpedo course" takes place. This is known as the "Electricity and mining course"; it lasts for forty working days. For the first twenty-two days, each day's work commences with a lecture, which is followed by practical work for the rest of the day. The lectures of these twenty-two days are devoted to the instruments of various kinds used in torpedoes, in gunnery, and in electricity, to their use, manipulation, care, and repairs; to cables, detonators, fuzes, primers, tubes, and dynamo exploders; to explosives and defensive mining; to attacks on harbors, sweeping and countermining, and to blockade mines; to wireless and submarine telegraphy; to defence against torpedoes and torpedo-boats, booms, nets, obstructions, etc.; to dynamos, motors, and searchlights. Immediately after each lecture the officers present engage in practical work upon the subjects that were under consideration in that lecture. After these twenty-two days come eighteen days of practical work in which harbors are mined and countermined and cleared, impromptu defences against expected attack are set up, different problems incident to this subject being worked out.

This course of sixty-five days is intended to be an advanced course of instruction of the highest character in torpedoes, electricity and mining, for a few officers specially selected to take it.

The second course for commissioned officers is known as: "Special course of instruction to qualify as torpedo lieutenants." This course lasts for twenty months. The officers who after undergoing this course

pass the required examinations are said to qualify as "torpedo lieutenants." The first eight months are spent at the Greenwich Naval College, studying principally the theory of electricity and chemistry. The remaining twelve months are devoted to studies supplemented by practical work in torpedoes and torpedo-boats, electricity and wireless telegraphy, gunnery and marine surveying. It is intended that at the end of these twenty months the officers who have undergone this course shall have become expert in all torpedo adjustments, in handling the torpedoes and torpedo-boats, in the knowledge of when and how and where to use them; in electricity as applied to naval purposes, in the knowledge of explosives, and of the various subjects necessary and akin to the proper use of the torpedo. The intent and effect of this twenty months' course of instruction is to prepare young officers for their duties aboard torpedo-boats and destroyers during the maneuvers and at other times, and in charge of the torpedo equipment aboard warships so provided. The torpedo lieutenant ordered to a ship has charge of all torpedo equipment and fittings, and all electrical generators and motors and fittings, and is responsible for their condition. He carries out the various torpedo exercises ordered by the admiralty; he gives every opportunity for instruction in torpedoes and electricity to untrained men; he acts as adviser on torpedo subjects to his captain; he must keep informed of foreign and home methods of harbor defence, and have a knowledge of the mine fields of British harbors. Before action he advises the captain of how the torpedoes should be worked, and he personally fires the torpedoes.

The next course is the "Course for Senior Officers." This is held in the spring of each year, and lasts for twenty working days. The first nine days are devoted to the study and consideration of service torpedoes, to making the necessary adjustments, to launching the torpedoes from destroyers underway, and to net-cutting experiments. The following nine days are spent in hearing lectures on electricity in its different naval applications, including wireless telegraphy, in naval mining, on the defence and attack of harbors, and in practical work in connection with these subjects.

The next course is the "Lieutenants' Short Course, and Officers R. M. A." This is for officers of the Royal Navy, the Royal Marines, the Royal Naval Reserve, and the Royal Indian Marine. The course is for forty working days, in which the torpedo is studied, and the adjustments are made, and torpedo target practice is had from destroyers underway at moving targets. Harbors are mined and countermined and cleared; the naval applications of electricity are studied practically.

The next course is the "Course of Instruction for Retired Officers."

This course consists of twenty-five working days, and is the same as that for senior officers, with the addition of two extra days for running Whiteheads and three days practical mining.

The next course is the "Course for Acting Sub-lieutenants," and it consists of twenty-five working days. The instruction is divided into two parts; the first lasts for ten days, and is devoted to "general torpedo work," in which the young officer is made familiar with explosives and methods of detonating. The time is principally spent in making tests, in looking for leaks and faults of the electrical connections and in repairing them. The second part of this instruction is called the "Whitehead Course," where the young officer is made familiar with the torpedo and all of its adjustments; he is practiced at running torpedoes from destroyers, and in the management of torpedo-boats. In the latter practical instruction is given in the use of the helm, steering, leaving and coming alongside a dock, handling the boat in confined waters, picking up buoys, methods of attacking ships at anchor and underway, and making attacks in company with other boats.

The next is the "Course for All Engineer Officers," which lasts for seven weeks, five weeks of which are spent in studying and adjusting and practicing with the Whitehead torpedo, and the two weeks following are spent in studying and practicing with the electrical instruments used for naval purposes.

TORPEDO INSTRUCTION FOR WARRANT OFFICERS.

Candidates for gunners, who are already torpedo instructors, are required to go through what is called the "Special Torpedo Course for Gunner (T.)." Men who are not torpedo instructors when selected to qualify for gunner (T.) will be required to qualify for that rate, and, if considered suitable, will be allowed to go on with the Gunner's Special Torpedo Course.

This course lasts for 100 working days, the first sixty of which are spent in studying mensuration, logarithms, and trigonometry; the next forty days are spent in working with electricity, torpedoes, and signals. On completing this torpedo course candidates are required to go through a gunnery course lasting 126 days.

Candidates for gunner (G.) are required first to take the course of sixty days to qualify as seaman torpedo man, unless they have previously qualified in this course, and then they proceed with the "Special Torpedo Course," which lasts for eighty days, and which is principally devoted to practical work with torpedoes, electricity, and signals.

TORPEDO INSTRUCTION FOR ENGINE ROOM ARTIFICERS.

Men of these ratings are required to go through an eight weeks' course of practical instruction in the torpedo shops, making adjustments and repairs, followed by five weeks' practical work in the electric shop, doing such work as is incident to the naval use of electricity.

In the British Navy there is a special rate called "torpedo instructor." Men holding this rate are carefully selected by the captain of the Torpedo School, and must qualify in a prescribed course of studies and practical work that takes 167 working days, forty days of which are spent in studying arithmetic, and the remainder of the time is devoted to torpedoes, electricity, and signals.

To qualify as chief armorer the candidate is required to undergo a course in studies and practical work in torpedoes and electricity that lasts for 155 working days; before a man can be rated "armorer," he must have had special instruction for thirty days in torpedoes and electricity, and the workshop.

TORPEDO COXSWAINS.

Coxswains for torpedo-boats are selected from petty officers (1st class) who are seaman torpedo men. They are required to undergo instruction for eighty-five working days in torpedoes, management of torpedo-boats and destroyers underway, torpedo target practice at moving targets, internal organization of torpedo-boats; the care and maintenance of such batteries, circuits, and searchlights as are found in torpedo-boats, messing, accounts, etc. Of these eighty-five days, thirty are spent in the handling of destroyers under varying circumstances.

COURSE OF INSTRUCTION TO QUALIFY AS LEADING TORPEDO MEN.

A certain number of seaman torpedo men are selected to undergo instruction to qualify as leading torpedo men. This course lasts for eighty-six working days, in which the following subjects are studied: Torpedoes, theory, adjustment, and use. Practical work with the electrical fittings to be found upon torpedo-boats. Signals.

COURSE FOR QUALIFYING AS SEAMAN TORPEDO MAN.

Likely men are selected to qualify as seaman torpedo men, and are required to undergo a course of instruction in torpedoes and electricity which lasts for thirty working days.

In the British Navy besides the destroyers assigned to the torpedo and gunnery stations for practicing the classes under instruction, three

flotillas, each composed of eight torpedo-boat destroyers, are kept constantly in commission; these flotillas were organized primarily for the instruction of the engineer's force, which is changed each month; the first week of instruction is spent in headquarter waters, where these crews are drilled into knowledge of their duties. Then each flotilla makes an independent sea cruise of three weeks. The purpose of this month's work is to give the men of engine room ratings instruction in their duties at firing, tending water, oiling, and in the various engineering duties incident to the work of destroyers. It should be remembered that these men are already picked because of their ability as firemen, oilers, etc.

The officer in command of the flotilla exercises his commanding officers in handling the boats under varied conditions, and in tactical drill.

COMMENT ON TORPEDO INSTRUCTION IN THE BRITISH NAVY.

In considering these different courses of torpedo instruction, one must believe that they were brought about and developed as a direct result of the extensive work with torpedo-boats during the yearly maneuvers and at other times. The use of torpedo craft has constantly emphasized their liability to accident from being operated by crews inexperienced in such vessels. In the British service likely men are selected to qualify as seaman torpedo men, and the best of these are later given extensive instruction to enable them to qualify as leading torpedo men. Those of the latter who show particular aptitude are specially selected to qualify as torpedo coxswains. It thus results that every man performing important duty aboard these torpedo-boats has received most careful instruction in those duties. The custom of the survival of the fittest holds place. The leading torpedo man is the best of a hundred seaman torpedo men. The torpedo coxswain is the best of a hundred leading torpedo men. The commissioning of great numbers of torpedo craft each year supplements to these various torpedo courses the necessary practical work with these boats, of tactical maneuvers, and the actual war use of the torpedo. The officers on this duty have all been specially trained.

The grand result is that Great Britain's torpedo-boat flotilla is efficient. But this is not all. There exists throughout the British Navy, in both enlisted and commissioned personnel, a comprehensive knowledge of torpedoes and torpedo-boats; when not in commission the boats are kept in efficient condition; when called into active duty valuable time is not lost either in making needed repairs, or in whipping the officers and crews of the boats into knowledge of their duties.

TORPEDO INSTRUCTION IN EUROPEAN CONTINENTAL NAVIES.

In all European continental navies the details of torpedo instruction are kept as secret as possible; nothing official concerning such information is published; but in different ways facts have come out which tell something about it. It may be said that the torpedo officers of these navies are given much instruction with torpedoes and electricity, and that this is followed by much practice in the handling of torpedo-boats underway, and in torpedo marksmanship at moving targets.

The following is taken from different foreign service publications; if there are any complete descriptions of the continental system of torpedo instruction, the writer with much search has been unable to find them.

TORPEDO INSTRUCTION IN THE FRENCH NAVY.

Officers desiring to have instruction in torpedoes are first required to qualify in electricity, after which for six months they are attached to the torpedo school at Toulon, where every morning they first listen to lectures and then do practical work with the torpedo mechanism, and with the electrical instruments used with torpedoes, and every afternoon is spent in running torpedo-boats with torpedo target practice at moving targets; the purpose of this six months' course is to familiarize each student officer with every adjustment required to the varied mechanism of the torpedo, and with the best methods of handling the weapon. After this course at Toulon some of these student officers take part in the constantly recurring torpedo-boat attacks, and thus receive much training in handling the boats. In the yearly maneuvers scores of torpedo-boats take part and torpedo-boat attacks always form a prominent feature of the maneuvers. It is the well-known preparation of the French for an offensive torpedo-boat warfare that has compelled Great Britain to an equal amount of work with the weapon.

Torpedo-boat men of the French Navy are specially selected for their duties. The most intelligent are picked out for special instruction in torpedoes and electricity, and in this way, as in the British service, superior classes of men are developed for this particular work.

A certain proportion of all the boats are kept in continual commission; each boat in commission is always accompanied by a number of other boats kept in reserve with skeleton crews. The boats in commission are constantly exercised, the regulations directing that they shall make two night sorties every month, and that at least once a quarter they shall undertake systematic maneuvers against a skeleton enemy; each boat in commission is required to fire a torpedo at least

three times a month, the boat being underway, and at least twice a month the boat must be travelling at a high rate of speed and the target must be moving. The boats in reserve are at all times kept in efficient condition; at least three or four times a year every boat in reserve is put in full commission and is required to perform a stated amount of regular torpedo-boat duty. When one considers the fact that France possesses several hundred torpedo-boats and destroyers, and that each of these is systematically exercised, one appreciates the great amount of practical experience in handling them that the officers and men of the French Navy receive.

TORPEDO INSTRUCTION IN THE GERMAN NAVY.

A rear-admiral is designated as "inspector of torpedoes." He has charge of all matters, technical or otherwise, connected with torpedoes; he is directly in charge of all torpedo-boats and their personnel, organizes and directs their exercises, and is responsible for their efficiency.

There are at all times in existence six "torpedo-boat divisions of the reserve," three of which have headquarters at Wilhelmshaven and three at Kiel. Each division consists of one "torpedo division boat," which is permanently commissioned as a depot-ship, and eight torpedo-boats. There are also at each of these stations two instructional torpedo-boats, which are permanently commissioned; these are used to train the personnel.

In the Autumn of each year a division of boats is commissioned at Kiel and another division at Wilhelmshaven; these are kept in constant torpedo practice until late in the year; early in the following April these divisions continue their practice and later are assigned for work in the Autumn maneuvers; besides these, other torpedo-boats are commissioned for the Autumn maneuvers, and are given three months' training beforehand; by much instruction and continual change of officers and men the German Navy may be said to be efficient at torpedo warfare; indeed the tactics of torpedo-boat attack at present practiced by most navies were originated and developed by the Germans.

TORPEDO INSTRUCTION IN THE RUSSIAN NAVY.

The Russian Naval Torpedo School is situated at Kronstadt; the number of student officers here undergoing instruction is limited to twenty-four, who are chosen from a number of officers that have undergone extensive study and practice for the purpose of entering this school; the course of study is limited to one year, which time is devoted to torpedoes and electricity. In conjunction with this Kronstadt school there is an instructional torpedo-boat flotilla in the Baltic Sea,

and an evolutionary torpedo-boat squadron in the Black Sea. The instructional torpedo-boat flotilla of the Baltic Sea is commissioned every year for three months; the time is spent in exercising the officers and men in various duties pertaining to torpedo warfare; the evolutionary squadron for training is commissioned every year in the Black Sea. It consists generally of twenty torpedo-boats, and for several months is exercised for the purpose of training officers and men.

PART IV.

The Torpedo-Boat Training Needed by our Navy.

All great naval powers possess torpedo-craft and all are prepared to use them. We have seen that in European countries much instruction is given in torpedoes and torpedo-boats to those who are to handle them. In our navy such instruction has been limited to but a few, and even to these few the time for such instruction has been much restricted. If all of our torpedo-craft were now to be commissioned for war service we would have to hope that the general excellence and zeal of our personnel would make up for the special instruction that we lack and which other services have had. But how much more formidable our torpedo-boat flotilla would be if its entire personnel were composed of officers and men all trained and experienced in their duties, and possessed of a confidence that comes from skill!

An intelligent appreciation of this weapon and of its possibilities, combined with a knowledge of when and how and where to use it, is necessary if it is to have effect in bringing war to a successful close. This requires on the part of the operators knowledge of the torpedo's mechanism, skill in making adjustments and in making repairs, and in the use of all instruments used with torpedoes and with torpedo-boats; the torpedo-boat officer should possess much experience in handling small frail craft of great vulnerability and of tremendous engine power; he should be a practical engineer, and he should have a knowledge of the best methods of torpedo-boat attack under various circumstances. The enlisted men should be picked men who have received special instruction for their particular duties.

It is not probable that our entire torpedo-boat flotilla will ever be commissioned, but in order that it might be mobilized for immediate effective service it is essential that special torpedo instruction should be possessed not only by a few, but by many throughout the service, so that to commission many boats would not be an embarrassing matter to the Navy Deparement.

Besides the ability to make destructive torpedo-boat attacks, our navy must be prepared to repel such attacks when made against us. Sincere as is our friendship with foreign powers it is still an armed friendship, and we are preparing to defend ourselves against any attack made by the navy of any foreign power; most European navies possess hundreds of torpedo-boats, and we must contemplate attack not from battleships alone, but also from these torpedo craft; officers who have had practical experience with torpedo-boats and who understand them in all respects, in their possibilities and in their limitations, are surely best qualified to repel attack from such boats.

It is apparent that our government has embarked upon a policy of yearly naval maneuvers on a scale commensurate with our necessities; torpedo-boat attack must always form a prominent part of the maneuvers; the education and training received both by the officers and crews making such attacks, and by those repelling them, will be most valuable if our torpedo-boats are handled by experts.

It seems that every possible consideration of our naval needs imperatively demands that torpedo instruction become important in our navy; it must be agreed that at present such instruction is open to but very few, and to these few it is limited in extent. With all of its capabilities for instruction, the Newport Torpedo School had but three officers receiving instruction last summer, and each of these three officers was detached and ordered to other duty before much instruction was received; this of course is caused by the scarcity of officers; but it is certain that the personnel will soon be largely increased, and if our naval officers will consider the importance of torpedo instruction a policy instituting such instruction will surely be adopted and carried out.

At the present time our navy is not entirely without torpedo instruction; a small part of it is receiving training of the highest character in torpedoes and torpedo-boats; the trouble is that this part is so very small; the instruction should be so very general, that, should it be necessary to mobilize a flotilla of torpedo-boats, it ought not to be difficult to commission them with officers and crews already experienced in torpedo-boat work. This torpedo instruction at present existing in our navy may be divided into three parts, each of which has grown up independently of the other two. The first part is the instruction given at the Naval Torpedo Station at Newport; the second part is the instruction received by the officers and men in charge of the torpedo-boats in reserve; and the third part is the instruction received by the officers and men attached to boats in regular service commission.

The first of these, at Newport, provides instruction for officers and men.

The regular course of instruction for officers is limited to 29 working days; this time is devoted to lectures and to practical work; the subjects considered are electricity, torpedoes, and torpedo-boats, and instruments and implements used with them, to explosives and to mines; this course includes the torpedo adjustments, the handling of torpedo craft, and torpedo target practice at moving targets from boats under way; this instruction has not been regular because no policy of ordering officers to undergo it has ever been adopted and then carried out; this year it has not been given because no officers have been ordered to take it. Last summer some of the officers attached to the North Atlantic Squadron received torpedo instruction at this station; this special course lasted for six weeks; the time was devoted to lectures and to practical work; the subjects under consideration were the assembling and disassembling, the installation and the adjustments of the various parts of the torpedo mechanism; to torpedo target practice from boats underway, to air compressors, electric attachments, mines, and explossives.

At the Torpedo Station there are classes of enlisted men receiving instruction; this is shown in the following, which is an extract from the Annual Report of the Naval Torpedo Station for 1902:

SEAMEN GUNNERS' CLASS.

"There are accommodations for a class of about fifty seamen gunners and nearly double this number could be graduated each year were it practicable to have that many sent here. The facilities and work required for a large class are but little greater than for a small one, particularly if a number of men or even a whole class could be sent at the same time. The total number under instruction during the last year has been thirty-three, of which number twenty have received certificates of graduation, one failed to qualify, nineteen have taken the course in diving, and ten are at present in the class. The full course embraces the following subjects, covering six months' time:

Electrical work (instruction)	2 weeks.
Electrical work (practical)	2 weeks.
Dynamo room	4 weeks.
Explosives and torpedo material	4 weeks.
Torpedoes	4 weeks.
Torpedo-boat work	1 week.
High speed engines, steam	3 weeks.
Diving (optional)	3 weeks.
Review	1 week.

Owing to the great demand in the service for graduates of this course of instruction the department has had to resort to the expediency of shortening the course to three months, and the time has been allotted in accordance therewith as follows:

Electrical instruction and practical work.....1 week.
Explosives, torpedo material and mines.....3 weeks.
Torpedoes .....4 weeks.
Running air compressors .....2 weeks.
Diving .....2 weeks.

It will be seen that the full course gives 11 weeks to electricity, dynamos and high speed engines. The new rate of electrician, with the electrical school at New York, no longer renders this extended instruction necessary for seamen gunners, and it has been limited to practical work with batteries, electric firing circuits, wiring, splicing, and testing circuits in connection with firing devices, mining, etc.

ENGINEERS' CLASS.

This class was established January 1, 1902, for the purpose of training machinists and firemen to perform the duties of their ratings on board torpedo-boats, and the course was limited to three months. The requirements of the service, however, have shown an even more urgent demand for water tenders and oilers for these boats. It is found practicable to train a second class machinist to be an oiler in three months, but only in rare cases can a new recruit be made a water tender in the same time. It is to be remembered that on a torpedo-boat even more than on a large ship, the water tender is the back-bone of the fire-room force. Not only must he be a man with a thorough knowledge of the boilers, piping and pumps, but he must have besides this the faculty of the control of men, the quality of coolness in emergency, and a keen sense of responsibility. Things happen quickly in the fire-room of a torpedo-boat and a moment's hesitation may mean a new boiler. The men to discharge the duties of this rate cannot be developed in three months, but should be carefully selected from the best firemen in the service and then given at last six months' instruction in the particular duties of their rating.

The boats used in training this class are the Morris, McKee, Dahlgren, Craven, Winslow, Stiletto, and third class boats Nos. 1 and 2. The variety of types is advantageous in that the men become acquainted with the different boilers and engines used in the Navy.

The course of instruction is given under eleven subjects for ma-

chinists and eight subjects for firemen and coal passers, as shown by the following schedule:

Engine Room.

(1) Main engines; arrangements and sizes of cylinders; valves; shafting; propellers; etc.

(2) Condensers, construction and purpose; how tubes are packed, plugged or withdrawn and replaced; how to test a condenser. Air and circulating pumps and all attachments.

(3) Auxiliaries; dynamo engine; steering engine; blower engine and compressor.

(4) Piping, leads of and purposes; situation, construction, and manipulation of all valves and their purposes. Situation of water tanks, connections and capacities.

(5) The particular duty of each part of the main engine. How pistons and valves are made steam tight.

(6) The purpose and general construction of the throttle valves, reversing gear, valve shaft, pass overs, drains, relief valves and traps.

(7) How to grind in and reseat valves; packing of glands and joints; different kinds of packing.

(8) Oil and water service. Difference in character of various oils.

(9) Bearings; construction, adustments, cooling.

(10) Indicators and counters, and indicator cards.

(11) Keeping the log; overhauling engines; adjustments.

Boiler Room.

(1) Construction and distinguishing features of the Thornycroft, Mosher, and Normand boilers.

(2) Boiler fittings.

(3) Feed pumps and their operation, derangements and remedies.

(4) Tending water.

(5) Tending fires under varying conditions of the forced draft.

(6) Care and preservation of water-tube boilers; cleaning boilers.

(7) Repairs to boilers; fitting man-hole gaskets; plugging and replacing tubes; repairing brick-work.

(8) Drainage and syphon systems.

For practical work the McKee, Stiletto, and torpedo-boats Nos. 1 and 2 go out twice a day, forenoon and afternoon, for two-hour runs and maneuvering, in charge of gunners and gunners' mates. The Winslow and Morris or Dahlgren and Craven go once a day or as often as officers can be spared to go in charge.

The machinists, upon arrival, are first assigned to the fire room of one of the small boats for a week, and then are transferred to the fire rooms of the larger boats for a week and later to the engine rooms. In a similar manner, the firemen, after three weeks in the fire room of each class of boat, are given one week in the engine room."

The contrast between the torpedo instruction given in our Navy and that in the British navy is striking; the reason that our Navy has received so little is not because it is believed that this little is sufficient, but partly because until the present our torpedo flotilla has been feeble in numbers, and also because it has been impossible to spare officers and men for extended instruction.

The second part of what may be called our torpedo-boat system consists of the boats commissioned in reserve at Norfolk and at Mare Island. At Norfolk there are ten or more boats commissioned in reserve, to which are attached three commissioned and one warrant officer, and a few enlisted men; the duties are to keep these boats in efficient condition, ready for service; to exercise the different boats occasionally at high speeds; to have torpedo target practice from boats underway; and to train the enlisted men in their duties. In connection with these duties there is much repairing and overhauling of machinery which would afford excellent instruction in engineering to young officers; though the extent of space devoted to machinery in a ship might within limits determine the number of the engineering personnel, yet it is the horse power that must measure the talent required; this is recognized in the British service, where we find that the engineer officers attached to destroyers are generally chief engineers in rank. The engine power of our new destroyers averages nearly 2,000 horse power more than that of most of the British destroyers; it approximates to the engine power of the Newark and Philadelphia, of about 4,500 tons displacement; surely engines of 8,000 horse power should be in the charge of an experienced engineer rather than in the charge of a novice; if we are to have a torpedo flotilla it is absolutely essential that young officers should be prepared for such engineering duties; the duty of the torpedo-boat is to bring the torpedo within striking distance, and this demands that the boilers and engines of the boat be in most efficient condition. The constant running of the torpedo-boats commissioned in reserve at Norfolk, with the consequent overhaul and repair of machinery, offers excellent opportunity for training intelligent young officers in the practical care and repair of machinery.

The third part of our torpedo-boat system is that of the cruising

section; this must always remain the capping stone of all torpedo-boat instruction; the section at present in commission consists of one destroyer and six boats; these are in constant activity in all ways that would tend to make these craft efficient for what might be expected of them in war service; the boats are exercised separately and in section; the exercises that are followed are designed to give the personnel of the section practice in handling the boats under various conditions, and also in handling the torpedoes. It will be agreed that torpedo-boat attack upon modern warships will not be successful unless the boats making it have had much drill in torpedo-boat tactics; as a result of such drill it is confidently believed that an attack by Lieutenant Chandler's section upon any warship would doom that warship to destruction. This section uses the German tactics; the section approaches at full speed, the boats grouped to form a wedge; when at a desired distance from the point of attack the boats disperse, fire their torpedoes, and endeavor to get away; to show how well the personnel has been trained in handling the boats it may be stated that when making these attacks the boats while traveling at full speed are held so closely together, the bow of one boat touching the quarter of the one just ahead, that a person can easily walk from the leading to the rear boats; when the signal for dispersion is made there is no collision, no confusion; and nine of every ten torpedoes discharged would destroy their targets.

From what has been done by this section it is believed that our Navy has great torpedo-boat possibilities; the great desideratum is that the entire flotilla might be mobilized, if desired, by an efficient, trained personnel; that this might be systematic, instead of desultory and uncertain, instruction should be inaugurated in our Navy, of a nature that would insure that throughout the service there would be many officers and men trained and experienced in torpedo-boat duties. It is probable that the personnel of the Navy will soon be increased, and that time for such instruction will be possible, it is suggested that something of the following nature would produce the desired results:

(1) Three months instruction for many officers and men at Newport in torpedoes and electricity.

Following this for some specially selected for torpedo-boat work:

(2) Six months duty and instruction in connection with the boats commissioned in reserve at Newport and Mare Island, where the instruction would principally be in engineering; the duty of keeping the machinery and boilers of these boats in efficient condition would of itself be instruction of the highest and most useful type, and, as all

line officers must be practical engineers, such instruction could be made most valuable to the general service.

For some of the officers and men who have had this Newport and engineering instruction:

(3) Duty for six months or longer aboard destroyers and torpedo-boats in commission, with drills and exercises modeled from those used at present by the torpedo-boat section commanded by Lieutenant Chandler.

In 1898 Lieutenant Commander Kimball said:

"If we are ever to have use for a navy of fighting ships we must have an efficient torpedo-boat service to supplement the fixed coast defences, or our fighting ships will surely be deflected from their legitimate off-shore work to the in-shore defence of our posts and coasts."

"From the extent and condition of our attackable coast, and from the fact that torpedo-boats are the only craft (bar armorclads) that can check raiding armorclads, we should lead the world instead of lagging behind it, in the development of torpedo-boat efficiency."

"We question the utility of torpedo-boats because we don't know how to utilize them."

OUR CONTEMPORARIES.

AN analysis of the contents of the principal military periodicals, systematically classified under a few general heads for the convenience of the reader and student, comprising extracts and comments, in which special attention is given to the most important and valuable articles.

MILITARY HISTORY, STRATEGY AND TACTICS.

1. Principles and Problems of Imperial Defence.—*Mar. Rund.*, Dec.
2. The Defence of Our Naval Fortresses.—*Unit. Serv. Mag.*, Dec.
3. The Future of Coast Defence.—*Same.*
4. The Naval Policy of Canada.—*Same.*
5. The Evolution of Modern Strategy.—*Same.*
6. The Strategy of the Paardeburg Campaign.—*Same.*
7. The Battle of Novi.—*R. du Cercle Mil.*, Dec. 5, 12.
8. Tactical Problem.—*Same*, Nov. 28, Jan. 2.
9. The French Railroads Used by the Germans in 1870-71.—*Int. Rev. Suppl.* 58.
10. The Importance of Numbers in the Attack on Fortified Positions.—*Int. Rev. Suppl.* 57.
11. The Importance of Fortified Positions in War.—*Same*, 56.
12. Machine Gun and Musketry Fire at Long Range.—*Same.*
13. Cavalry Raids.—*Int. Rev. Beih.*, 47.
14. Flanking Infantry Fire.—*Kriegs. Zeit.*, 9.
15. Machine Guns and the Use.—*Same*, 9, 10.
16. New Guns—New Tactics.—*Same*, 10.
17. Test of Experimental Fire Control Installation at Pensacola, Florida.—*Jour. Arty.*, Nov., Dec.
18. Torpedoes and Submarines.—*Army and Navy Gaz.*, Nov. 28.

The *first* of these is an excellent review of Colonel May's recent work.

The *second* is a paper advocating the turning over of the British coast forts to the navy. The arguments in favor of this change are

very weak, as a glance at the article will show, but the remarks on necessary co-operation between army and navy are worth noticing:

"The methods we employ for the defence of our dockyards and fortified ports abroad and at home appear to present a rather curious anomaly. I refer to the system of dual control which exists at the present day.

"Portsmouth and Plymouth, to take the two most important arsenals, are fortified solely for the purpose of affording the navy opportunities for docking and repairs, and for providing our fleet in war time with points of assembly before an action, or with shelters of refuge in case of a reverse.

"In the latter case the ships, as long as the coast defences are secure, can remain under protection till they have replaced casualties, filled up with coal, or made good any defects they may have sustained.

"Thus it is not surprising that the object, for which certain places along the coast are strongly fortified, is a naval one, and a naval one only; and in this fact lies the anomaly, because the troops to whom the defences of these places are entrusted are soldiers under the War Office, who own no allegiance to the naval commander-in-chief; being, in fact, altogether outside his jurisdiction and control.

"If there were a strong chain binding the army and navy together; if the two were accustomed during peace time to work together for a common purpose, and to co-operate intelligently in all matters of vital importance to the public service; then, indeed, such a state of affairs as a joint control over our fortresses and dockyards might be intelligible. But this is not so. In its whole organization the navy is separated from the army by a wide gulf.* The Admiralty is 'run' on entirely different lines to those of the War Office. The training of the naval officer is entirely dissimilar to that which an army officer receives, and, finally, the traditions, customs, law, and interior economy of the navy have little in common with those of the army.

"I do not for a moment wish to state that all these variations and distinctions would really militate against an intelligent co-operation between the two services, if all other things were equal; but until there is a very much better understanding between the War Office and the Admiralty, whereby joint schemes are originated in peace time, and everything is done to make the two services recognize the fact that their separate duties, for the maintenance of the empire, are much more closely connected than they appear to have imagined, these small-

*This manifest absurdity is now recognised as such by very many, and consequently there is reason to hope that wiser methods may eventually prevail.—Ed. U. S. M.

er differences in training will prevent the possibility of a thorough understanding ever being brought about between the two services.

"We have strategic frontiers, protected harbors, colonies and coaling stations all over the world, and it is for their protection that our army is maintained. The problems which confront us are vast, as compared with those which occupy the minds of German statesmen, and underlying the solution of them all is the fact that our army is unable to move hand or foot without the assistance of naval transport and the protection of naval guns."

The *third* article advocates *mobile* guns of 6-inch or 7.5-inch caliber, transported on railways from point to point, for our coast forts. In view of the fact that warships have never accomplished anything worth mentioning against sea-coast forts, *modern* at the time of attack, we have no cause to fear such efforts on the part of an enemy.

The article, however, contains much matter of interest, and we give a few extracts:

"The primary rôle of our garrison artillery has always been defined as coast defence, but the term has been used by us only in a limited sense, for in the British empire it has always been associated with the seaward defences of our naval bases, which from time immemorial have been mainly fixed armaments, placed with a view to commanding the approaches to our naval harbor dockyards.

"The term 'fortress' has been vaguely used from time to time in referring to these bases; but the absence of extensive land frontiers requiring permanent defences throughout the empire, has led to a complete separation of ideas between British and Continental artillerists as to the meaning of this term, and the elaborate science that has been developed on the Continent for the general defence of fortresses has found practically no counterpart with us. The reason for this has been chiefly our assumption of complete supremacy at sea. We have, as a matter of fact, assumed that the landing of any considerable hostile force on the coast of Great Britain was almost an impossibility, and the resultant system of coast defence which we have applied to our bases at home we have applied more or less indiscriminately to those abroad.

"The sole aim both as to the armaments and as to the training of the garrison artillery, has been to secure the efficiency of our fixed seaward defences. In short, a large proportion of the artillery of our regular army has been trained solely in the management and use of guns of position about our bases, and this in face of the fact that our army requires enormous expansion in the event of a great war, and that of the fighting arms the artillery of field armies is by far the most difficult to expand.

"In the development of our system of coast defence there has always been one great outstanding feature, and that has been the want of reliable professional data; true we have always been given strategical data, which we must assume to have been correct, and the nature and extent of our armaments have been governed accordingly, but our own defences have never been tried, and reliable professional data have been, to a very large extent, wanting or lost in the experience of others.

"Any system of coast defence applicable to our bases in the future must fulfil two main conditions:—

"(1) Armored ships must be kept at bay, even though we cannot penetrate their main armor, or hope to sink them.

"(2) Operations from the landward side of our fortresses must be made as desperate as possible."

In regard to the rest of these articles under this particular heading, we have only space to remark that the *tenth* to the *sixteenth* inclusive are all valuable contributions to the study of modern tactics, and are most interesting studies. That on "Cavalry Raids," in particular, discusses what Russia will probably accomplish with her cavalry now massed on the German frontier, and illustrates the subject by the great cavalry raids in our Civil War.

The *eighteenth* article, however, deserves some special notice, since it bears on a subject of vast importance. The experiment referred to in this article is here briefly given:

"*The Belleisle Experiments.*—With the view of testing the effect of the explosion of a Whitehead torpedo against a ship's bottom, an important experiment was carried out at Portsmouth on September 4th against the Belleisle, which was moored in Portchester Creek for the purpose. As the result of the explosion the ship heeled over and sank in twenty minutes. A compartment had been built outside the port bow below the water-line, and this compartment was filled with corn-pith cellulose. At the time of the experiment there were ten feet of water under the keel of the ship. A Whitehead torpedo was lashed by divers under the compartment, and the torpedo was fired from the Vernon by means of an electric circuit. No sooner was the torpedo exploded than—as seen from a distance of less than a mile—a spray that rose to an approximate height of forty feet was sent into the air, and the ship immediately gave a heavy list to port. The force of the explosion had not only smashed the special compartment, but had blown the whole of the cellulose into the air, and, simultaneously, the concussion had so violently torn open the side of the ship that the water rushed in with considerable force. It has been determined in

the event of the cellulose's effectually plugging the breach to take the ship back to the dockyard for inspection, but so rapid was the heeling over that three tugs were employed in pushing the Belleisle towards the shore, where she sank in twenty feet of water on the mud in Bomb Ketch lake. The rapidity with which she sank is conclusive evidence of the destructive power of the torpedo, while the instantaneous discharge of the cellulose into the air disproves the theory as to its plugging capacity. The ship was floated and docked at Portsmouth on the 8th ult.

"The experiment was one of the most important that has ever been carried out with the Whitehead torpedo, as the ship had been so stiffened as to be stronger below the belt than any seagoing war-ship; but, on the other hand, by way of compensation, the torpedo was specially favored. The compartment built outside the ship was about two feet in beam, and this was filled with corn-pith cellulose; next to this compartment came the skin of the ship; between the skin of the ship and the boiler-room were six longitudinal bulkheads, and these were intersected by a traverse bulkhead extending from the boiler-room to the skin of the ship. Two of the longitudinal compartments had a beam of three feet six inches, and each was filled with coal. The Whitehead torpedo was lashed under the outer casement that was filled with corn-pith cellulose, and was electrically fired from the Vernon. If the conditions did not exactly comply with what would obtain in actual warfare, it will be seen that in the handicapping the ship was given the advantage. As a matter of fact, however, the outside casement with its cellulose was blown into the air the instant the torpedo was exploded, the bulkheads were shattered, and the decks were so blown up inwards, upwards, and downwards, that not a ton of coal could be found in the original emplacement. The work of destruction in a latitudinal line stopped at the bulkhead of the boiler-room; but the extraordinary radius of the explosion afforded some useful instruction.

"When it was found that the ship was sinking in deep water she was pushed by the tugs on to a mud bank, and then the Liverpool salvage crew were called in to salve her. Subsequent investigation showed that the hole in the side of the ship measured twelve feet by eight feet.

"The result of the trial is regarded by the Torpedo School as such a success that the ship is to be brought forward for further torpedo experiment.—*Times, Naval and Military Record, etc.*"

The article itself refers to this experiment in the following terms:

"A representative of one of the evening papers recently drew from

Admiral the Hon. Sir Edmund Fremantle some interesting comments *apropos* of the Belleisle experiment. The views of Admiral Fremantle are deservedly respected, and the gallant officer keeps well abreast of recent developments; but it is not always safe to rely fully upon a journalist's interpretation of technical opinions. In this case the opinions retailed to the public would appear to be accurate, and they are, at all events, interesting at a time when torpedoes and submarines bulk largely—perhaps too largely—in the popular imagination.

"The admiral is represented as saying that if the damage done to the Belleisle was as great as he had been informed it was, the power of the torpedo had been underestimated in the past. This opinion the admiral qualified by commenting upon the age of the ship and the wear and tear to which she had been subjected. For this reason, Admiral Fremantle would like to ascertain the effect of torpedo fire upon a more modern vessel, such, for example, as the Alexandra. No doubt further experiments are necessary and will be made, but we incline to question if the admiral has been quite accurately reported on this point. The power of the automobile torpedo may have been underrated in some quarters, especially in the past; but, in recent years at least, few experts have doubted the power of the modern Whitehead to inflict vital damage upon the hull of a cruiser, or even a battleship. The explosion of 200 pounds of guncotton in actual contact with a ship's bottom will, obviously, inflict great damage. The exact extent of such damage is not, perhaps, known; but it is held probably that any ship would be disabled, as one or more compartments would almost certainly be flooded. From what we know of the condition of the Prince George, after the penetration of one compartment, it may be assumed that both speed and gun-fire have been seriously crippled.

"Admiral Fremantle went on to speak of the difficulty of torpedoing any ship when steaming at high speed. It is well that the point should be 'rubbed into' the public mind, since there is a tendency to exaggerate the powers of the torpedo, and consequently of the submarine. This tendency will be noticed, at any rate by naval men, in various articles lately contributed to the magazines by writers possessed of quite superficial knowledge of the practical aspects of naval warfare. Mr. A. S. Hurd, for example, in the current *Nineteenth Century*, conveys, unconsciously perhaps, the view that naval warfare in the very near future will be decided under water. Like many others, he preaches the dominance of the submarine, and is gravely perturbed by the activity of France in the building of these virtually untried craft. The French expect to possess thirty-six submarines by the end of 1904, whilst this country has fifteen built and building.

So be it; we are not perturbed, and we are entirely confident that the Admiralty will continue to augment Captain Bacon's flotilla with all the expedition necessary. Meanwhile, we have thirty officers and 300 men under training in our submarines, and experiments to test their value are constantly in progress.

"Civilian critics may be advised to note what Admiral Fremantle had to say as to the practical difficulties in the way of torpedoing a ship in motion. The extreme range of the torpedo is but 2,000 yards; its maximum speed thirty knots. Hence it follows that very great accuracy and expert judgment is needed to strike a ship travelling, say, at eighteen knots speed. In ship and fleet actions it is questionable whether the opponents will close within torpedo range, owing to the menace of the quick-firing secondary armaments. But, even so, the skilful commander is not going to be paralyzed by the discharge of a torpedo. The track of the weapon can be detected; the ship then menaced will usually be able to evade the torpedo by prompt use of the helm, granted, of course, that the submarine boat will sometimes be able to deliver an unexpected shot. It would be foolish to ignore such possibilities. But the invisibility of the submarine is an almost vital factor in such cases. At present the speed of submarines when submerged does not exceed eight knots, whilst the surface speed is not much higher. Such craft, it is plain, will seldom succeed in getting within range of ships in motion. Their menace to vessels lying at anchor is hardly to be questioned. Increased speed, higher visual powers, and larger radius of action are the urgent needs of the submarine. These qualities may be developed soon or late; but, as matters stand, the latest type of submarine boat does not yet rank as an offensive weapon."

ARTILLERY, ARMOR AND FORTIFICATION.

1. The Medium Caliber Artillery on Battleships.—*Mar. Rund.*, Jan.
2. The Reintroduction of Torpedoes on the U. S. Battleships.—*Same.*
3. Machine Guns and Their Use.—*Kriegstech. Zeit.*, 10.
4. Buffers for Long and Short Recoil.—*Same*, 9; *Int. Rev. Suppl.* 58.
5. The Artillery Material in South Africa.—*Int. Rev. Suppl.* 57.
6. Firing Against an Armored Turret.—*Same.*
7. The New Field Artillery.—*Jour. Arty.*, Nov., Dec.
8. The Panoramic Telescopic Sight (Korrodi).—*Same.*
9. Capped Shell.—*Same.*

10. Armor-piercing Projectiles and Critical Velocities.—*Same.*

11. Formulas for Velocity and Pressure in the Bore of a Gun, and Their Verification by Recent Experiments.—*Same.*

12. New Forms of Armored Forts.—*Same.*

Several of these articles are of technical interest only, but a few have some general interest.

The *first* discusses the present relations between guns and armor and advocates an increase in the caliber of the medium artillery.

The *sixth* discusses the firing on the turret of the Suffren (previously referred to in *Our Contemporaries*) and advocates ships' turrets rounded on top (like the so-called *Gruson* turrets for land forts) in order to prevent normal impact. Such turrets could be cast, and could also be lighter than cylindrical turrets, and would be much cheaper, at the same time remaining as effective as the present forms.

The *seventh* is an excellent description of our recently adopted field artillery material.

The *eighth* is a description of a new sight for field guns.

The *ninth* and *tenth* are excellent discussions of the value of capped projectiles.

The *tenth* is by the well-known authority on ballistics, Colonel James M. Ingalls, of our army.

The *twelfth* describes the new forms of forts advocated abroad for the defense of the *land* side of coast forts, or for the forts on a land frontier.

WARSHIPS.

1. The Navy of the U. S.—*Mar. Rund.,* Jan.

2. Armored Cruisers.—*Same.*

3. The Medium Caliber Artillery on Battleships.—*Same,* Dec., Jan.

4. The Re-introduction of Torpedoes on U. S. Battleships.—*Same,* Dec.

5. Small Cruisers.—*Int. Rev. Suppl.,* 56.

6. The Construction of Warships by the Principal Navies.—*Same, Suppl.,* 58.

7. The Importance of Auxiliary Fleets in Naval War.—*Same.*

8. New German Warships.—*Same.*

9. The German Naval Program to 1917.—*Int. Rev.,* Dec.

10. Naval Progress in Germany.—*Army and Navy Gaz.,* Nov. 21.

11. The State of the French Navy.—*Same,* Dec. 12.

12. Torpedoes and Submarines.—*Same,* Nov. 28.

13. The German Battleship Zöhringen (illustration).—*Jour. Unit. Serv. Inst.*, Nov.

14. The French Naval Program.—*Same.*

15. The French Naval Budget, 1904.—*Mar. Rund.*, Jan.; *R. du Cerc. Mil.*, Nov. 28.

16. The French Battleship St. Louis (illustration).—*Jour. Arty.*, Nov.-Dec.

17. Changes in the World's Navies.—*Mar. Rund*, Dec., Jan.; *Jour. R. Unit. Serv. Inst.*, Nov.; *Int. Rev.*, Dec., Jan.

Several of these articles have already been discussed under other heads (see above).

The *tenth* is an article of some interest:

"The launch of certain German warships within recent weeks, and particulars published concerning the naval progress that is being made in Germany, have attracted interest, and evoked comment in this country. It is impossible for us not to regard the rise of Germany and the expansion of her fleet without a great deal of curiosity and some concern. The Emperor has declared that the future of the Fatherland 'lies upon the water,' and last December, at the new Palace, Potsdam, he said that every day showed more plainly a sound development of the country without the co-operation of sea power to be impossible—*nicht denkbar* was the phrase he used. In the year-book of the German 'Nauticus,' a chapter upon World Politics and Sea Power expresses the ideas of those who are doing great things to extend German influence at sea. Within the last thirty years the population has increased from 41,000,000 to 58,000,000, and where four men lived there are now six, while one man out of five is dependent upon food from abroad. Germans are found extending the commerce of their country in every market and emporium of the world, and the foreign commerce of the country has increased by leaps and bounds until it has reached a volume whose magnitude a few years ago was never anticipated. 'Nauticus' expresses the feeling of Germany when he quotes the Hanseatic maxim, 'My Field is the World.' The German colonies labored under difficulties, but their time is coming, and the colonial agitators are asking for more. It is not, therefore, surprising that a great fleet should be called for and constructed. In World Politics, says 'Nauticus,' that Power has the advantage which possesses the greatest strength at sea, and he holds up the lesson of Fashoda as an inspiration and a warning to his countrymen. He tells them that imperfect preparation is dear and useless, and we hear the ring of Captain Mahan's words where he says that the fall of Bonaparte resulted from the battle of Trafalgar—he might have said from

the sea conditions that made Trafalgar possible—and that Moscow, Leipzig, and Waterloo were the logical consequences of French naval decline.

"Provision is made for two new battleships, M and N, for a large cruiser designated as Ersatz Deutschland, the small cruisers M and Ersatz Merkur, and a division of torpedo boats or destroyers. The plan of transferring the men from the old hulks to barracks on shore is in hand, and torpedo stations are being established, while improvements are going forward in the ports, including Danzig, which is to undertake a larger share of work, and is to be provided with a floating crane and a floating dock. Last year three battleships were completed, the Wettin, Wittelsbach and Zähringen; two, the Mecklenburg and Schwaben were carried far towards completion; the Braunschweig was launched; the Elsass was upon the stocks; and the battleships Hessen and Preussen laid down. During the present year the Elsass, Hessen and Preussen have been launched, as well as the armored cruiser Roon, which was begun last year. A sister cruiser, the Prinz Adalbert, has been brought forward for her trials, and the Prinz Friedrich Carl, launched last year, is making very rapid progress at Hamburg. As to the smaller cruisers of the 3,000 ton class, three, the Berlin, Bremen, and Hamburg, have been launched this year, and several of the same class took the water in 1902."

ORGANIZATION, ADMINISTRATION AND MOBILIZATION.

1. Our Fleets and Squadrons.—*Army and Navy Gazette,* Jan 2.
2. The Problem of National Defence.—*Natl. Serv. Jour.,* Feb.
3. Conscription.—*Same.*
4. The Fleet.—*Nav. Inst.,* Dec.
5. Naval Administration.—*Same.*
6. Annual Report of the Secretary of the Navy, U. S.—*Mar. Rund.,* Jan.
7. Coast Defence.—*Mil. Serv. Inst.,* Mar.-Apr.
8. A Colonial Army.—*Same.*
9. Mounted Troops.—*Same.*
10. Volunteer Cavalry.—*Same.*
11. Pioneers in the Militia.—*Same.*
12. Pay of Non-commissioned Officers.—*Same.*
13. The Expansion of the Hospital Corps in War.—*Jour. Mil. Surg.,* March.
14. The Chinese Army.—*Jour. R. Unit. Serv. Inst.,* Dec.-Jan.
15. The French Naval Programme, 1900-06.—*Same.*
16. The French Naval Programme for 1904.—*Mar. Rund.,* Jan.

17. Changes in the World's Navies.—*Jour. R. Unit. Serv. Inst.*, Dec.-Jan.; *Nav. Inst.*, Dec.; *Mar. Rund.*, Jan.

The *first* of these articles relates to the recent reorganization of the British Fleet, and is of interest as indicating some new principles in the composition of squadrons:

"It is interesting at the beginning of the new year to notice the changes which have been made during the last twelve months in the composition of our fleets and squadrons on home and foreign service. Twelve months ago and we were just realizing that the old coastguard squadron under the orders of the superintendent of naval reserves was to be constituted as the home fleet, now the home fleet has been established as a separate force with two flag officers in command. With very few exceptions also, the battleships constituting it are of the Royal Sovereign class, and the cruisers belong to the same date. The policy, as Lord Selborne said in his memorandum last year, of changing the composition of the home, Channel, and Mediterranean fleets, so that they shall be composed of homogeneous classes of ships, is steadily progressing, and should be complete this year. The home fleet is independent of the admiral superintendent of naval reserves and of the Channel squadron. It has its nucleus of battleships in the home squadron, consisting of the former port guardships, and has its headquarters at Portland. The rest of the fleet is made up of the battleships and cruisers which form the coastguard squadron. The destroyer flotillas, too, which at one time were separate organizations, are now placed under the orders of the admiral commanding the home fleet, and a special captain (D) has been appointed, who is responsible under the admiral of the home fleet for the general organization of the destroyers as a whole. The Channel fleet, also with two flags flying, has been re-supplied with cruisers, and will, in future, consist of six out of the eight battleships of the Majestic class, two being always under refit as reliefs. The changes in the cruiser squadron are still more apparent and important. This squadron, commanded by a flag officer, is now wholly composed of twenty-three knot armored cruisers, two of the Drake and four of the Kent or 'County' class. Thus we have two fleets and a squadron at home all improved and rendered more efficient. * * * Generally it is to be noted that there has been an accession of force to all the principal squadrons, and that as a number of armored cruisers will be ready for use shortly it is mainly in this direction that future changes may be anticipated."

The *second* and *third* articles deal with the grave problem of enlistment in the British army, and contain much of general interest for our own land:

"In a previous issue a brief account has been given of the purposes for which our system of national defence is maintained, of the character of the armies to which it is likely in any important struggle to be opposed; and lastly, a short reference was made to the composition of our army under the conditions which obtain to-day. If our armed forces are insufficient in quality and training for our imperial needs, if those needs should ever bring us into collision with any of the Continental powers, we have next to consider the cost of our army as compared with other nations and to suggest a scheme of organization suited to our empire. It may at once be stated that consideration is given to the difference in physical and political conditions which exists between Great Britain and any of the European powers; but we may with fairness inquire whether, given those conditions, we get as good value from our system and our expenditure as other countries do.

* * * * * * *

"We find that Great Britain pays £27,588,000 for 210,600 men permanently embodied and a reserve of 438,268.

"Austria pays £16,842,000 for 400,115 men permanently embodied and a reserve of 838,701.

"France pays £28,440,000 for 610,866 men permanently embodied and a reserve of 2,752,552.

"Germany pays £32,809,927 for 600,668 men permanently embodied and a reserve of 2,623,332.

"Russia pays £36,647,089 for 1,124,037 men permanently embodied and a reserve of 1,970,571.

"It is important to remember that the reserves to the permanently embodied army in the case of the four Continental powers consist of men drawn from every class of society, representative of the best types physically, every one of whom has been trained for a definite period upon clearly defined principles, while the whole organization, with its clothing, arms and equipment, is absolutely ready for embodiment in the various units of regiment, division, army corps at a moment's notice.

"Admitting our peculiar position and the necessity of maintaining an army voluntarily recruited for service abroad, does the proposition that we are paying at far too high a rate for what we get need further demonstration?

"Even if the objection be made that foreign countries diminish annually the wage-earning capacity of their communities by permanently

embodying twice as many men as we do, we should still in respect of this only add an amount to their annual charges which would leave their military budgets at a far lower sum comparatively than our own, and we should have to place to the credit side of the account the undoubted physical and moral advantages which accrue to the youth of a nation which submits to military training."

"Burke had a passage in his essay on 'The Sublime and the Beautiful,' in which he points out the extraordinary power of some words to impress the mind, by their sound alone, with a feeling of beauty, terror, or sublimity. He was, of course, dealing with poetic diction. Something similar was, no doubt, experienced by the old lady who assured her vicar of the deep comfort she derived from the blessed word 'Mesopotamia.'

"This mysterious influence of words probably accounts partly for the fact that the British people are so easily led by phrases and frightened by words 'full of sound and fury, signifying nothing.' How fine a sound has the word 'voluntary!' Does not the word 'liberty' call up visions of English freemen struggling for their rights against feudal lord and tyrant king? What need, then, to inquire whether a thing is good or just or advantageous to the State provided we can attach a label to it which shall check discussion and disarm criticism?

"All those who have made serious effort to place before their fellow-countrymen the absolute justice, necessity and advantages of adopting compulsory military training as the basis of our system of national defence, have found that their difficulties vanish like smoke as soon as they have laid the bogey which stalks gaunt and forbidding—not much less horrid than the figure of war which skulks in the background of Mr. Anning Bell's design—through the mind of the average Englishman. The name of this formidable hobgoblin is 'Conscription'—*monstrum horrendum, ingens.* The word only has to be uttered with the proper accent of horror, and a pitying reference to the foreign nations supposed to be languishing under its awful sway for the mind of the average audience to be filled with visions of men torn from the bosom of their families and sent to drag out a dreary existence for years in the scorching plains of India or the fever-stricken coasts of West Africa, to return broken in health and spirit, the victims of ruthless militarism. The most remarkable thing is that not one out of a hundred who use the word have the slightest notion of what 'Conscription' is. *Omne ignotum pro—horrifico!* But this does not prevent their meeting any proposal for a moderate form of compulsory military training with a frantic flapping of danger signals, on which are displayed the words, 'Liberty of the Subject,' 'Mili-

tarism,' 'Conscription,' and—that dearest battle-cry of all opponents of reform—'un-English!'

"We will not in the present article lift up the veil and glance at some of the abuses which lie hidden under the glorious 'voluntary' system, and we must reserve to a future occasion a brief reference to our past history—the last thing taught to the English schoolboy—in order to show that, supposing, for the moment, everything 'un-English' to be bad, the principle of universal service in defence of the country is as old as the origin of the English people.

"Conscription is the compulsory enrollment, by lot, of citizens in a permanent force, with the option to the well-to-do to purchase a substitute among those who are too poor to refuse the price offered. It was a system invented by Frederick the Great and adopted by Napoleon in order to fill the ranks of their armies for purposes of aggression. It was abolished in Prussia by the two great patriots Stein and Scharnhorst, who saw the gross injustice, as well as the miserable results, of expecting one section of the population, and that the poorest, to undertake the burden of national defence for all. Most European countries, however, maintained the system until 1870.

"The sudden and complete collapse of France in the Franco-Prussian war was the death-knell of conscription. In that war a highly trained long-service army, chiefly composed of substitutes raised by conscription, met a 'nation in arms,' and went before it. The result was that one nation after another, France, Austria, and Denmark leading the way (and with good cause, as the years 1864, 1866, and 1870 can testify), abolished conscription and adopted universal service."

The *fourth* article is an able plea for a General Staff for our Navy, made by its present commander, Rear Admiral H. C. Taylor, U. S. Navy.

His concluding words are very striking:

"We may say of the fleet to-day that it has attained to a certain degree of preparedness for war, which is creditable alike to the officers and crews and to the department that directs its actions. That it can go much further without change in its general administration is to be doubted. It may advance in certain directions and retrograde in others, but further improvement in all qualities, resulting in well-balanced and fully rounded effectiveness, is unlikely without that superior direction which, under various forms and names, is found essential to all great occupations and enterprises."

(Articles *five* to *seventeen* will be considered in our next issue.)

EDITORIAL NOTES.

While there may be nothing added to the technical knowledge of ordnance by the events of the next few months, it is certain that there will be a thorough review of such ordnance information as may be current in the United States and a thorough test by the world's standards. The Secretary of the Navy has taken steps which will carry the ordnance investigation into the complete field of ordnance construction, and with the two-fold medium of an impartial board of investigation and the utilization of Admiral O'Neil's services in observation abroad, is likely to leave as one of the monuments of his administration a series of ordnance papers that will be of very great value. It has been said during the month that the American naval ordnance is lamentably behind foreign performance. This is a statement that is scarcely susceptible of proof since it must depend in the final analysis on the performance of guns in service. An attempt has been made to compare the figures of foreign gun makers with the paper performances of American guns. It is to be questioned if the high muzzle energies claimed for the foreign guns have been attained, while in the matter of successful target practice, the American guns so far have been satisfactory, barring, of course, the Iowa accidents, the reason for which is as yet to be revealed. The order reducing the powder charges of American guns is but a temporary precaution, pending the result of the investigations in progress, and it is a fair prediction that the recognized standard of the ordnance work of the American Navy a year hence will be equal if not superior to results that have been gained abroad.

* * *

The changes in the personnel of the chiefs of two bureaus of the Navy Department this month completes with one exception the entire change of bureau heads under the present administration of the Navy Department. Rear Admiral Charles O'Neil terminated his service as chief of the Bureau of Ordnance on his retirement on March 15, and was succeeded by Rear Admiral Converse, whose place as chief of the Bureau of Equipment was taken by Captain H. N. Manney. It has been an open secret that Rear Admiral Converse's incum-

bency in the Bureau of Equipment was temporary and that he was eventually to become the chief of ordnance. Much has depended on his opinion as to whether in his experience as chief equipment officer he found that the continuance of the bureau was advisable. From the cessation of the propositions to amalgamate that bureau with others of the department, it is to be assumed that a real need and work for the Bureau of Equipment has been found to exist by the experience of one of the best officers of the Navy today. Admiral Converse's administration of the Bureau of Equipment has been marked by his usual great executive ability and clearness of handling.

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An earnest effort is being made by General Crozier, chief of ordnance of the Army, to have the number of officers on ordnance duty increased. The work of the Army has been to a great degree founded on the results of the study of the brilliant coterie of ordnance officers who are now counted among the older men of the Army. This is also true in a degree of the officers of the Navy who are recognized as ordnance experts. The activity of the past six years has been unfavorable to the education and individual research of young officers in ordnance problems and the question of the successors to the present ordnance men of the service has become a real one and one which will have to be solved by the encouragement of a portion of the younger men to "go in" for the more abstruse problems connected with artillery construction. This is proposed to be met in the Army by the increase of the number of officers detailed to ordnance duty, while in the Navy it is proposed to establish on ordnance corps. The latter expedient is of doubtful wisdom so far as it involves the distinction of certain officers from the rest of the service in terms. Opportunities of study and improvement with suitable ordnance duty can be arranged for naval officers whose taste inclines in that direction without making distinctive corps lines with the inevitable separation of interest from the general duty of the service.

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A change of front of much significance occurred during the month in the determination to continue marines on the Isthmus for the protection of the canal zone and for the sustention of the duties imposed on the United States by the Panama canal treaty. It had been intimated that the Army would take the place of the marines as soon as the treaty was signed and it was understood that orders had ac-

tually been issued to get a regiment ready for the service. Before the exchange had been made, however, it was announced that the marines would continue the occupation on the theory that marines, being based upon the ships of a naval squadron, would be in the position of temporary occupants merely, while the establishment of Army posts would give the matter the effect of being a permanent military occupation. It is hinted that this theory will be carried out in all military occupation outside of the actual possessions of the United States, and the inference is drawn that if there should be occasion for landing troops within the continental limits of Asia, marines would be selected for the purpose on the above stated theory. It is to be assumed that the change of policy was agreeable to the Marine Corps, which had to contemplate a restriction of its service as a consequence of the former policy, and which can now see a possible extension of size and duty as the result of the new policy. The preliminary work of establishing depots and camps on the Isthmus was well done by General Elliott and the work on hand at the present time is mainly in the way of substituting permanent structures for the temporary barracks now in use. Plans have been developed by which two sections of marines will alternate in the duty of occupation, one section being at Guantanamo for rest and recuperation while the other is on guard on the Isthmus. It appears at present that the Colombian opposition has practically ceased, and the chief work of the Marine Corps will be in preserving order among the thousands who will troop to the Isthmus for all sorts of purposes as soon as active work on the canal begins.

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The military legislation of the current session of Congress has advanced to the point of the conferences between the Senate and the House of Representatives at the time of writing. The legislative, executive and judicial bill which carries appropriations for the civil force has been passed. It marked a departure from legislation since 1898 by making specific appropriation for employes of the Navy Department who had been paid out of the "Increase of the Navy" appropriation. The practice of the department, under which a large proportion of the civil employes had been employed and paid from a general appropriation has been abolished and further additions to the force except through specific appropriation are not to be made. The feature of temporary and special employment from general appropriations in the

War Department is, however, continued.

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The Naval Appropriation bill, which would have been finally enacted but for the illness of the confreres on the Senate side, was more extensively debated in both houses than for several years past. The question of the increase of the Navy was taken up and a considerable opposition to further authorization of battleships and armored cruisers was voiced. The opposition did not come entirely from the Democratic side, as Representative Burton of Ohio took issue on the subject of increased naval appropriations and stated his opinion that the naval expenditures were becoming excessive. A very large amount of statistical information of more or less merit was included in the *Congressional Record* and it seems to be indicated by the course of the debate that future authorization will be more difficult to get than has been the case in other years.

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The building programme included in the Naval Appropriation bill includes one battleship of sixteen thousand tons, two armored cruisers of 14,500 tons, three scout cruisers and two colliers. Two protected cruisers were included in the original estimates instead of the second armored cruisers, but the change was made by the House committee, largely on the statement of Admiral Dewey. Not more than two of these vessels can be built by one contracting party, and there is the usual provision that the Secretary of the Navy may build the ships in the navy yards in the absence of satisfactory bids or the presence of collusion. The discretionary appropriation for the Secretary of the Navy for the purchase of submarine torpedo boats has been increased to $850,000. The total amount of the appropriations carried by the bill is $100,866,000, and the intimation is given that the appropriation for the Navy will run in the vicinity of the hundred million stage for some years.

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The question of the use of the torpedo, largely in the form of the submarine torpedo boat, was one of the chief factors of the debate. The information as to the use of the torpedo in the present war was not sufficiently in detail to sustain the allegations of the opponents of the authorization of armored ships, but a considerable element of doubt was raised which might have been turned into negative action on the building programme had the torpedo results been more conclusive. The proposition that there is nothing to take the place

of the battleship as an engine of war and that it must still be taken as the unit of naval warfare, offensive and defensive, was sustained and the danger of reliance on an exclusive torpedo defence seems to be passed. The increased appropriation for submarines indicates, however, a renewed interest in that type of defensive boat, while a new element was added after the naval appropriation had passed the Senate by the inclusion of an amendment to provide a submarine topedo boat of the Lake pattern for the use of the Army in its submarine mine work. As the result of the report of a board of Army officers who made a trial of the Lake boat and found it adapted for use in laying and repairing mines, an amendment was offered to the Fortifications bill providing for the purchase of such a boat. This brought up the question of the use of naval appliances by the Army and an unusual debate, for the Senate, resulted. It was pointed out that the logical extension of the entrance of the Army into naval affairs would bring a call for harbor defence vessels for the Army in the nature of floating batteries. The appropriation was, however, included in the bill, probably with the idea of having the matter threshed out in conference, as there is no doubt that a strong stand will be made in the House of Representatives both against the idea of the Army having a boat at all and in opposition to the type chosen.

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The Service will miss for many a day the bright face and kind heart of Captain C. E. Colahan, who died last month. No better officer ever held a commission and no better man ever lived. He was brave, manly, honorable, and his career from the time he entered the Navy, to the day of his death, reflected credit on the service he loved.

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Readers of THE UNITED SERVICE will recall that in the February number appeared as the frontispiece a portrait of Paymaster Harry E. Biscoe, U. S. Navy, and in the same issue a statement of his controversy with Rear Admiral Evans upon the subject of the verdict in the Nicholson court-martial. On the 7th of February the Navy Department cabled Evans to detach Biscoe from the Oregon and send him home on the Solace, as he was desired for duty in the office of the Paymaster General. To this cable Evans replied that Paymaster Biscoe was about to be tried by court-martial. The Department cabled asking upon what charges Biscoe was to be tried, and the reply came that it was for neglect of duty, false-

hood, and a shortage of twenty-six hundred dollars in ships' stores; the day this cable reached the Department a second cable was sent from Manila to New York, stating that Paymaster Biscoe was to be tried for a shortage of twenty-six hundred dollars in his accounts, and this item appeared in all the afternoon papers of the country, but thanks to the prompt action of Biscoe's friends, who knew him to be an honest man, the cablegram did not appear in the morning papers. Still, the damage was done, and the family of Mr. Biscoe received indignant telegrams from all over the country, asking what such a charge meant, and those who did not know the officer believed, of course, that he had robbed the Government. What the charge meant was that Rear Admiral Evans had the power to try any officer of his command on any charges he might be pleased to formulate, and in this case he meant to disgrace Biscoe by trying him upon charges he must have known he could not prove, even with a court the members of which were selected by the convening authority. The court met, heard the evidence, and acquitted Biscoe of every charge save that of neglect of duty.

Of the charges affecting the honor of Paymaster Biscoe even this court had to acquit him, but for the neglect of duty they reduced him fifteen numbers in his grade, a sentence which for cruelty has never been equalled in the Navy. A few months ago an officer in command of a small vessel ran down and sunk a tug in the harbor of Norfolk. A court-martial resulted, and the officer was convicted of inefficiency in the performance of important duty, and sentenced to a loss of five numbers in his grade. Only this month an officer of the medical corps was tried for scandalous conduct, unbecoming an officer and a gentleman, found guilty, and sentenced to a loss of ten numbers in his grade. But Biscoe, the soul of honor, is reduced fifteen numbers in his grade. What does the President think of the whole matter, and what will Secretary Moody do when the papers reach Washington? What the newspapers think of this officer may be gleaned from the excerpts appearing elsewhere in this issue.

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This novel proposition, with the accomplishment of the movement to promote Brigadier General Ainsworth to be major general at the head of the correspondence and records of the War Department, were the leading features of the legislation on the Army side. There are several new propositions in the Navy bill, however, and that act promises to be a notable one. The

chief fight is on the question of the location of a training station on the Great Lakes. The board which investigated the feasible sites reported in favor of a location on Lake Michigan. Conflicts were developed between the advocates of the alternative sites on that lake and between these and the Lake Erie representatives, especially those who were interested in placing the station at Put-in-Bay. The provision was objected out of the bill in the House of Representatives, but got back in the Senate, with an appropriation of two hundred and fifty thousand dollars, and a provision for a board to be appointed by the President to select a site, the report to be transmitted to Congress for its final action. In this form, it will probably get through conference, though it is a question if the contest on the subject of a location is more than deferred to another session of Congress.

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Two hundred thousand dollars is included for the erection of barracks at League Island and the same sum for barracks at Norfolk. This appropriation is made in consequence of the report of the barracks board and was stricken out on a point of order in the House and re-inserted in the Senate. The barracks are for enlisted men and are to take the place of the receiving ships at present in use for this purpose.

Other new propositions in the bill, mainly Senate amendments, are as follows:

Civil engineers and professors of mathematics are given the pay and allowances of naval constructors, and assistant civil engineers the pay and allowances of assistant naval constructors.

* * *

Warrant machinists, not to exceed twenty, are added to the list of warrant officers of the navy.

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Three thousand additional men are added to the enlisted force of the Navy.

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Beginnings are made on the appropriations for the naval stations at Guantanamo and Olongapo. No serious opposition was developed to either of these projects. Three hundred and eighty-five thousand dollars is appropriated for beginning the work at the Cuban station and eight hundred and sixty-two thousand, three hundred and ninety-five dollars is appropriated for the work at Olongapo. In addition, the steel dock for Cavite which is eventully to go to Olongapo is provided for in a continuing appropriation.

As a step toward the ultimate consolidation of the work of the different bureaus in the navy yards, a provision is made empowering the Secretary of the Navy to consolidate the power plants at such navy yards as may be possible. This is one of the results of the committee inspection of last summer, which found a considerable duplication of plants, especially those furnishing light and power. All money appropriated for separate plants is made available for the consolidated plants and a further appropriation of three hundred thousand dollars is made for the consolidation.

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The Secretary of the Navy is authorized in his discretion to remove the naval cemetery at Annapolis to another location in order that the present site of the cemetery may be used for the naval hospital. Protests are already being made from outside against the exercise of the discretionary power on the part of the Secretary in carrying out this change.

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A naval magazine on the New England coast north of Cape Cod to cost not to exceed five hundred thousand dollars is authorized by a Senate amendment after having been stricken out in the House. The old Chelsea magazine is to be abolished.

The appropriation for the transfer of the remains of officers and men has been changed from the old reading of "without the continental limits of the United States" to the blanket provision including those who die "ashore or afloat," thus providing transportation of the remains of those who die in the United States.

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The completion of the naval hospital at Canacao is provided for and provision is made for the sale of stores to civilian employes beyond the continental limits of the United States and in Alaska.

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The Senate added an amendment to the bill providing the sum of $400,000 for the purpose of putting the old frigate Constitution in the same condition she was when in active service. This was the result of the agitation of the Massachusetts Historical Society on the subject. Objection has been raised to the size of the appropriation and the matter will probably be the subject of conference action.

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Twenty-five thousand dollars is appropriated for steam turbine tests.

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Additional instructors are provided at the Naval Academy to take care of the new large classes

and Band Master Zimmerman is to have the rank and pay of an ensign.

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The time of required service in warrant grades before being eligible to examination for a commission as ensign has been reduced to two years from six.

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Enlisted men of the Marine Corps serving as gun pointers or in other special ratings, or who hold good conduct badges, are put on the same footing as to added pay as enlisted men of the Navy. The lack of such financial recognition has been the source of complaint in the Marine Corps and it is believed that this Senate amendment will be greatly for the improvement of the enlisted personnel of the Marine Corps.

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Another Senate amendment to cure a discrimination against the Marine Corps provides for the retirement of Marine Corps officers who served in the Civil War in the same manner; namely, with the next higher grade, as officers of the Navy of similar service.

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As a whole, the naval appropriation bill may be said to be a most satisfactory piece of legislation. Progress is shown in very many directions and the total amount carried is not in excess of the actual needs of the Navy. A very considerable proportion of the total is made necessary by the construction previously authorized, now nearing completion and requiring heavy payments for ordnance and equipment as well as for actual construction. The increased number of enlisted men incurs added expenditure which cannot be avoided and the indispensable conditions of active service for all the vessels of the Navy cost much money, but in the result of an efficient Navy ready for instant use amply justify the expenditure.

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The proposed service pension bill, which was reported by Chairman Sulloway of the Committee on Invalid Pensions and which was to have been pushed to a hearing in this session of Congress, has been rendered unnecessary by the action of the President in authorizing the establishment of a scale of disability pensions, which, if not providing a comprehensive service pension immediately, will have that effect within a very few years. Under the legislation permitting the payment of a pension for disability, rendering the soldier incapable of labor, a sliding scale has been arranged which will pay six dollars per

month at the age of sixty-two, eight dollars per month at the age of sixty-five, ten dollars at the age of sixty-eight and twelve dollars at the age of seventy. Although a service pension to cover all supposable cases would not be in effect until 1914, this computation supposing a boy of twelve enlisting in the Army in 1864, practically all the soldiers of the Civil War will be entitled to a pension before 1910, and the increase will be more gradual than would have been the case if a service pension bill had been passed as proposed. It is now only necessary for a soldier of the Civil War on the Union side to prove his service, and he will come under the provisions of pension legislation when he has reached the age of sixty-two years.

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Interest, which is at present somewhat skeptical, is manifested in the reports which come from English sources of the operations against submarine boats with specially devised steel nets. The recent manœuvers are said to have developed the plan of sweeping the vicinity of a battleship with such nets after the style of the toilers of the sea in search of the succulent inhabitants thereof. A periscope of a submarine was entangled in the net, broken off, and the submarine, deprived of its eyes, was compelled to await the coming of a rescuing party.

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Iteration of the statement that the Mayflower is being kept for use solely as the President's yacht is somewhat irritating to the personnel of that vessel, which has had one of the most exacting series of tours of duty that has fallen to the lot of any vessel in the United States Navy. The Mayflower took an active part in the maneuvers and work of the summer, and during the fall and winter has been in constant use in the hardest kind of naval work. No vessel in the Navy is paying better for being kept in commission.

SERVICE SALAD.

Readers of the "United Service," are cordially invited to contribute to this department items of either fact or fancy, grave or gay, instructive or only entertaining; in short, any literary flotsam and jetsam likely to interest our subscribers.

COMMODORE PORTER AND THE FRIGATE ESSEX.

A Story of the Last War with Great Britain.

When war was declared by President James Madison in 1812 against Great Britain, David Porter was the thirteenth on the list of captains in the American Navy. He was born in Boston in 1780 and entered the Navy as midshipman in 1798 and ascended from rank to rank until he was posted as captain in July, 1812. He was known by his associates as a dashing and brave officer, and so much was he esteemed by our government that he was appointed to the command of the U. S. Frigate Essex and was sent on a cruise to the Pacific Ocean, where Great Britain had a large fleet of whalers, among which Porter did damage to so great an extent that he attracted the particular notice of the British Cabinet, which sent out its vessels of war to capture and destroy this formidable enemy. This they succeeded in doing only by hemming him in in shallow water in the neutral port of Valparaiso in Chili and forcing him to engage with two ships of war purposely sent from Great Britain. The Essex was a 32-gun frigate, her opponents carried 81 guns.

In detailing to the Navy Department the loss of the Essex, Captain Porter says on his passage from Port Praya to Fernando de Noronha he captured the English packet, Nocton, and took from her about £11,000 sterling, and sent her to America in charge of Lieutenant Finch, known afterwards in the service, as that distinguished officer, William Compton Bolton. Porter, before proceeding to the Pacific, cruised off Rio de Janeiro and continued to do the enemy much damage. The British admiral was in pursuit of the Essex and it was necessary for Captain Porter to get to sea as quickly as possible. Accordingly the Essex stretched to the southward, scouring the coast as far as Rio de la Plata. Commodore Bainbridge's instructions left it discretionary with the commander of the Essex what course to pursue, so he accordingly shaped his course for the Pacific. He rounded Cape Horn in heavy gales and arrived at Valparaiso on the 14th of March, 1813. Here he took in as many provisions as he could stow and ran down the coasts of Chili and Peru; in this track he fell in with a Peruvian corsair which had on board 24 Americans as prisoners, being the crews of whale ships which she had taken on the coast of Chili. Peru and Chili were allies of Great Britain. Porter did not stop to argue the matter but threw all the corsair's guns and ammunition overboard, liberated the Americans, and wrote a letter to the Viceroy of Peru and it was delivered to that official by the captain of this piratical craft. He then proceeded to Lima and off the port of Callao recaptured one of the whalers. He then proceeded to the Gal-

lipagos Islands, off which he cruised for six months, during which he touched but once on the coast of America for fresh water. During this cruise of six months he captured twelve British whalers carrying 302 men and bearing 107 guns. One of these ships, named the Atlantic, he furnished with an American crew and called her the Essex, Junior, equipped her with 20 guns and gave command of her to Lieut John Downes, afterwards and for many years one of the brighest and bravest of the officers of the old Navy. He afterwards circumnavigated the globe in command of the frigate Peacock. Lieut. Downes conveyed the prizes to Valparaiso and returned with news that a squadron, under command of Com. James Hillyar, consisting of the frigate Phoebe, of 36 guns, the Raccoon and Cherub, sloops of war, and a storeship, of 20 guns, had sailed to gobble up the Essex, as she was doing too much damage to be allowed further liberty. The Raccoon and Cherub had been for some time patrolling for the Essex on the coast of Brazil, but finally left to join Sir James Hillyar in the Pacific. The Essex had been at this time nearly a year or so at sea and consequently required some repairs to put her in a state to meet an enemy. Porter was a quick thinker. He with his prizes proceeded to the Washington group discovered by Capt. Ingraham, of Boston. Here he overhauled and repaired, laid in four months' provisions and sailed for the coast of Chili, December 12, 1813. On arriving at Valparaiso he found it rumored that the British squadron had been lost in rounding Cape Horn. This brave officer had completely broken up the British navigation in the Pacific; the vessels which he had captured had been laid up and dared not venture out. He entirely destroyed the British whale fishery, and it is known to be a fact that the actual injury done this branch of British trade was several millions of dollars, independent of the expenses of the vessels sent in search of the Essex by our antagonists. From the captures he made he was furnished with sails, cordage, cables, anchors, provisions, medicines, and stores of every description, and immense amounts of clothing for his sailors. Every prize proved a well-found storeship. The officers and crew of the Essex lived on the enemy and for more than a year of constant cruising Porter was not under the necessity of drawing bills on the Navy Department for any object and had been enabled besides to make considerable advances to his officers and crew on account of pay. His crew during all this time of cruising had been remarkably healthy; there was but one case of scurvy and but ten men had died. He had done all the injury that could be done British commerce in the Pacific and he still hoped to signalize his cruise before leaving that sea. Porter had the impression that the British commodore would try to meet him at Valparaiso, so he took the initiative, hoping, if they did not meet, to capture some of the enemy's merchant ships which were said to be expected from England.

Commodore Hillyar with the Phoebe and Cherub and storeship, all mounting 81 guns and carrying 500 men, together with the crew of an English letter of marque which was lying in Valparaiso harbor, were all prepared with flags bearing the motto, "God and country', British sailors' best rights; traitors offend both," intended as a reply to Porter's motto, "Free trade and sailor's rights," under the erroneous impression that the crew of the Essex were chiefly Englishmen. The force of the Essex was

46 guns and her crew was reduced by prizes to but 255 men. In reply to the British motto, Porter hoisted at his mizzen, "God, our country and liberty; tyrants offend them." These British vessels of double the force of the Essex cruised off the port of Valparaiso nearly six weeks. Porter tried his best to bring on an engagement with the Phoebe, but Commodore Hillyar seemed determined to avoid a contest on nearly equal terms, whereupon Porter determined to put to sea the first opportunity which should offer, particularly as the Tagus, of 38 guns, and two other frigates had sailed for the Pacific in pursuit of him. A rendezvous having been appointed for the Essex, Junior, under Lieut. Downes, Porter got sail on the Essex and proceeded directly to sea. The enemy were close in with the point forming the west side of Valparaiso bay, but in running out a heavy squall struck the Essex and carried away her main top mast, precipitating the men who were aloft into the sea, who were drowned. The British ships made chase and in her disabled state the Essex could not run into the common anchorage ground but ran close into a small bay about three-quarters of a mile to leeward of the battery on the east side of the harbor and let go his anchor *within pistol shot of the shore* where he intended to repair damages.

The enemy continued to approach and showed an evident intention of attacking the American regardless of the neutrality of the place where Porter was anchored.

The Phoebe got a position under the stern of the Essex and the Cherub on her starboard bow, but her position became so hot from the fire of the Essex that she ran under the stern of the American, where the English ships kept up a hot, raking fire. It will be seen at once that the British ships had broken the laws of neutral ports for which Chili should have held them accountable, but as in the case of the privateer, General Armstrong, when she was attacked by a British squadron in the port of Fayal, there was no attempt made by the governments of Chili and Portugal to recognize a neutrality by personal efforts; these governments were too weak to say their souls were their own; they were, in fact, too powerless to strike a blow against Great Britain. Had it not been for a change in the wind occurring the Essex could have escaped scot free while the British vessels were necessitated to repair damages. In this engagement one gun in particular on the Essex was manned three times, and in the course of the action fifteen men were slain at it. So great had been the carnage that Porter determined to run the Essex on shore and destroy her, and here it was that the wind shifted and caused him to surrender. Of the 255 men with whom the Essex began the engagement but 75 remained at its close. The defence of the Essex brought no disgrace upon the American Navy. The action of the British ships was a gross insult to every maritime nation in cutting out in a *neutral port* a frigate rating 32 guns with a force of over 80 guns, when the former laid at anchor within pistol shot of a battery. This proceeding on the part of our antagonist cannot be upheld; it was dishonorable.

The Essex took fire several times during the action, alarmingly so fore and aft—flames were bursting up each hatchway and at one time Com. Porter had no hopes of saving her. She was not then three-quarters of a mile from shore, and should she blow up, as the fire was gaining upon the magazine, our boats having been destroyed by the enemy's shot, I di-

rected those of our crew who could swim to jump overboard and endeavor to reach the shore, in which some were successful and some perished; but the majority stayed by the ship and turned their whole attention to extinguishing the flames. There were but 75 of the 255 men of the Essex remaining who began this battle, which lasted two hours and a half, and not only forty-five minutes, as reported by Com. Hillyar to the British government. The Essex fired 75 broadsides and upwards of 50 by the enemy. After his capture Porter entered into an agreement with Com. Hillyar to disarm his prize, the Essex, Junior, and proceed with the survivors of the Essex to the United States, and he granted a passport to secure her from recapture. To capture the Essex it cost the government of Great Britain over six millions of dollars, and yet her capture was brought about entirely by accident, and the action was a dishonor to that government. During the action our Consul General, Mr. Poinsett, called on the governor of Valparaiso and requested that the batteries might protect the Essex. The request was refused. Mr. Poinsett left the country. After the action Com. Porter and his crew were paroled and permitted to come home in the Essex, Junior, as a cartel. Off Sandy Hook they were detained twenty-four hours by the British razu Saturn in company with the frigate Narcissus. Porter objected to this detention and on July 6 left the Essex, Junior, about thirty miles outside of the Hook in a yawl with six men and landed on the 7th at Babylon, L. I., where he procured a wagon, took on board his yawl and jolly tars and reached Brooklyn about 5 P. M. The Essex had landed all her specie, amounting to two millions of dollars, at Valparaiso previous to her capture.

Com. Porter's first naval experience was as midshipman in the American frigate Constellation, one of the three ships of war, Constitution, United States and Constellation, which Congress caused to be built in 1797, in the presidency of John Adams, when the Constitution captured the French frigate L'Insurgente, of vastly superior force. In October, 1803, he was captured in the Philadelphia and remained a prisoner in Tripoli till a treaty was made. In 1822 he published an interesting account of his cruise in the Essex; in 1826 he resigned his position in the U. S. Navy and entered the service of our sister republic, Mexico, as Admiral with a salary of $25,000. Later he became U. S. Chargé d'Affaires to Turkey and died in that country in 1843. His son, David D. Porter, in our late Civil War, became the head of our Navy, succeeding Admiral Farragut. The Porters were always a fighting family. BENJ. F. STEVENS.

Complete exoneration on all the charges presented against him save that of neglect of duty is the verdict in the case of Paymaster Harry Earl Biscoe, of the battleship Oregon, recently tried by court-martial on numerous charges, including that of falsehood and shortage of supplies to the value of $2,800. He has been sentenced to a loss of fifteen numbers in grade.—*Register*, March 12.

FROM *THE COMMONER.*

American naval officers are given credit for the efficiency of the Japanese navy by Lieutenant Henry E. Rhodes, now on duty at the Brooklyn Navy Yard. Lieutenant Rhodes was officially identified with the navy of Japan as early as 1868, and in an interview with a representative of the *New York Tribune*, the lieutenant

said that the Japanese navy really began with the purchase of the armor clad Stonewall Jackson (later named the Adzuma) from the United States government, in 1866, although the construction of the naval dockyard at Yokoska was commenced in 1865, under the supervision of a French engineer. This was not completed till 1879. It cost nearly $2,500,000. The Stonewall Jackson was built in France, under a contract with the Danish government, and was to be known as the Sphynx, but as this was about the time of the closing of the Schleswig-Holstein War, and there was delay in the completion of the vessel, Denmark became lukewarm in carrying out the terms of the purchase, and the boat passed into the possession of the Confederates. She put to sea soon afterward, but owing to some derangement of the steering machinery she ran into Ferrol, Spain, for repairs, in February, 1865, where were lying the American war vessels Niagara and Sacramento. The commander of the American vessels allowed the Stonewall to escape, and she went to Lisbon, and thence across the Atlantic to Havàna. Here she lay until after the close of the Civil War and was then given up by Spain to the United States. Later the Stonewall was sold to Japan, and she was sent over there by the United States, under command of Captain (now rear admiral) George Brown, and delivered at Yokohama in the latter part of the spring of 1868.

At the time referred to Lieutenant Rhodes was an officer in the Asiatic Squadron, and his ship had been for months at Hiogo and Osaka, where had been the greatest activity in connection with the revolution resulting from the overthrow of the Tycoonate, in which Lieutenant Rhodes and several other officers in command of armed squads of sailors took part in defending the American legation and other American interests at Hiogo, following an assault by Prince Bozen's forces upon an assembly of foreign sailors, who were quietly observing him and his retinue pass through the town. Lieutenant Rhodes says: "Another of our officers was H. Walton Grinnell, a lieutenant in the volunteer navy, and a nephew, I believe, of Moses Grinnell. In March, 1868, Grinnell was commissioned an ensign in the regular service, but his commission did not reach him till late in May. He then declined to accept it, and asked for an honorable discharge, that he might accept an offer of the Japanese government of a commission as admiral at a salary of 42,000 itzaboos (about $14,000 United States money) a year. His request was granted, and he accepted the appointment of Japan and remained for about three years."

Continuing his interesting narrative, Lieutenant Rhodes says: "At the same time the American consul at Hiogo, a German, whose name has passed from me, was appointed chief constructor, and to me was offered the appointment of chief engineer. For specific reasons I declined the office, but did offer to accept service temporarily, and for two or three months I gave a group of young Japanese engineer aspirants such instruction as my time would permit in marine engineering, and gave demonstrations on the Stonewall, explaining to them the mechanism of the engineer's department and the operation of boilers, engines, etc., on a warship, and the use of tools. I cannot claim to have done very much in this small way toward creating the navy of Japan, but Grinnell and the Hiogo ex-consul gave most valuable services. They deserve the most credit for their work in Japan and in other countries, taking with them

a number of bright young Japanese to study construction, armament and navigation and the general operation of a warship. It may be said, therefore, that the Japanese navy had its beginning in 1866; and under American instructors, and they have gone on steadily increasing their armored fleet, in addition to building up an unarmored fleet, all armed with the best rifled guns. The first armored ship constructed for Japan was built on the Thames and was launched in 1877, about six years before our new navy was begun. She was the Foo-So, and had a displacement of 3,718 tons. About the same time contracts were made in England for the two composite armor-belted corvettes, the Kon-Go and the Hi-Yei. Then in 1885 the Naniwa and the Takachiho, built by the Armstrongs in England, were launched. They were protected cruisers of 3,700 tons displacement and eighteen knots speed, and were conspicuous in the Japan-China War."

According to this American naval officer, Japan is now seventh in the list of naval power, with six battleships, three coast defense vessels, eight armored cruisers, fifteen protected cruisers and eleven small cruisers and gunboats, with a total tonnage of 237,899 tons. In addition there are ninety-three torpedo boat destroyers and torpedo boats. The battleship Mikasa, completed in 1902, is the largest battleship in commission in the world, having a displacement of 15,200 tons, and a speed of eighteen and one-half knots. Japan's dockyards are credited with equipments equal to any in the world for construction and repairs. In 1902 Japan's Diet passed a bill providing for the establishment of a steel foundry at the Kura arsenal for the manufacture of armor plate. Lieutenant Rhodes concludes: "We are inclined often to speak of the rapid advance of modern Japan, but the development of the military and naval forces of the Empire has hardly been appreciated by foreigners. Aspiring to play an important part in the politics of Eastern Asia, she has spared no effort and shrunk from no sacrifice to place herself in the matter of armed equipment on a level with her possible competitors. The Japanese are born sailors, and a country with so extensive and vulnerable a seaboard could in no case afford to neglect its maritime commerce. The administration of her naval department has been the subject of acrimonious party conflict at times, but there has been no disagreement on the broad imperial policy of a largely increased naval outlay. A shipbuilding program was agreed on a few months ago to begin this year the construction of four battleships of 15,000 tons each, two armored cruisers, of 9,900 tons each, four second-class 5,000 ton cruisers, fifteen torpedo boat destroyers and fifty torpedo boats."

We have not by any means heard the last of the case of Paymaster Harry E. Biscoe, U. S. Navy, the result of whose court-martial has already been announced in telegraphic information from Manila. The friends of the officer in this country are determined that the department shall review the case, official information of which has not yet reached Washington. Enough, however, is known to justify the expectation that Paymaster Biscoe will, as soon as possible, make an appeal to the Navy Department and ask for a consideration of the circumstances which led to the charges against him. These charges in the first instance were so serious as to have threatened that officer's dismissal from the Navy, but the court amended the accusation so that the sentence resolved itself into a reduc-

tion of numbers and to the finding that Paymaster Biscoe was guilty only of neglect of duty. Those who know the officer believe that such a finding must have been somewhat technical, and in view of the "feeling" which must have existed between the commander in chief of the Asiatic fleet and the naval paymaster, it is suggested the case against the latter may have reached an acute stage on that account. It is too early to give more information on the subject than is to be found in the promise of those naturally prejudiced in Paymaster Biscoe's favor, but it seems to be a settled thing that the Navy Department will have to take up the case in the light of the additional facts to come from the Asiatic station.—*Army and Navy Register*, March 1.

The verdict in the case of Paymaster Harry E. Biscoe, of the battleship Oregon, recently tried by court-martial on several charges, including shortage of supplies to the value of $2,800, has been received in Washington from Manila. The court exonerated him of all the charges made against him, save that of neglect of duty, and sentenced him to a loss of fifteen numbers in grade. It is stated that the court-martial will not interfere with the Department's recent order assigning him to duty in Washington.—*New York Post*, March 19.

AT SIX O'CLOCK.

S. W. Gillilan,

In *Baltimore American.*

On the street at six o'clock when the people homeward flock
There is something fascinating for the lover of his kind;
There is every sort of face in that anxious homeward race
That the wisest physiognomist could e'er expect to find.
There's the face that's filled with joy like a child with latest toy;
There's the face that's all preoccupied with business or care;
There's the face that bears its pain with a smile that's all too plain;
There's the face that has the hallowed look that pictured angels wear.

There are faces crafty, hard; there are lovely faces marred
With a look of hate and cunning that the Father never gave;
There are faces filled with woe, in this human torrent's flow;
There are faces with the harried look of hireling or of slave;
There are faces gentle, sweet, that are blessed ones to meet;
There are faces harsh, repellant with their settled smile of scorn;
There are faces that impart stories of a broken heart—
Faces sad that shone with pleasure when they started forth at morn.

Oh, the faces on the street that at six o'clock you meet,
As they hurry from the places where they toil from morn to night—
Is there one amid the throng you could cheer with smile or song?
Is there one whose heart is heavy while your love could make it light?
Some will hurry home to weep till they lose their cares in sleep.
Some will carry home the sunshine that the waiting loved ones need.
'Tis the open book of life with its tale of love and strife,
Written large and clear and simple so that he who runs may read.

EXONERATION FOR BISCOE.

PAYMASTER OF OREGON CLEARED OF ALL CHARGES SAVE NEGLECT OF DUTY.

CHARACTER UNSTAINED AS RESULT OF COURT-MARTIAL ORDERED BY ADMIRAL EVANS—PAPERS TO BE REVIEWED.

Complete exoneration on all the charges presented against him, save that of neglect of duty, is the verdict in the case of Paymaster Harry Earl Biscoe, of the battleship Oregon, recently tried by court-martial on numerous charges, including that of falsehood and shortage of supplies to the value of $2,800. He has been sentenced to a loss of fifteen numbers in grade, which in the case of a line office would amount to 150 numbers.

The case of Paymaster Biscoe, who was one of the best known officers in the pay corps, has attracted widespread attention, not only because of the excellent reputation of that officer, but also in view of the singular coincidence that it was he who entered a vigorous protest with the Secretary of the Navy last year against the castigation of Admiral Evans, of the court, in the case of Assistant Paymaster Rishworth Nicholson, of which Paymaster Biscoe was a member, for what the admiral regarded as an inadequate sentence. After long consideration the Secretary of the Navy decided not to uphold the protest of Paymaster Biscoe, but he refused to indorse the severe language used by Admiral Evans in his arraignment of the court. Friends of Admiral Evans on the Asiatic station and at home were indignant at the protest of Paymaster Biscoe.

Nothing was known of the charges against Paymaster Biscoe until a few weeks ago, when an order was sent from the Navy Department to Admiral Evans detaching Paymaster Biscoe from the Asiatic station and assigning him to duty in Washington in the Bureau of Supplies and Accounts. Admiral Evans' reply to the order was a brief cablegram saying that Paymaster Biscoe had been ordered before a court-martial on numerous charges.

It is authoritatively announced that the verdict in Paymaster Biscoe's case, which completely exonerates him on all charges affecting his character, will not interfere with the Department's order assigning him to Washington.

In view of the singular circumstances surrounding the case of Paymaster Biscoe, it has been decided that the papers in the case, when received here, shall receive the most rigid review, both at the hands of the judge advocate general and probably the Secretary himself. It was said at the Navy Department that only the brief news of the verdict had been received.

Paymaster Biscoe's father is a resident of this city. The officials will inform him of the verdict to-day.—*Washington Post.*

BOOK REVIEWS.

A Trooper's Narrative of Service in the Anthracite Coal Strike, 1902. Stewart Culin, Private, Second Troop, Philadelphia City Cavalry. Philadelphia: George W. Jacobs & Co. 1903. Pp. 91.

This neat little volume contains an entertaining account of the experiences of the National Guardsmen in the coal strike of 1902, written as a souvenir of this particularly difficult and trying service.

The *Second Troop* dates back to 1780, and has a very interesting his-

tory, having been in the service of the United States in that early year (1780), again in 1794, on the breaking out of the Whiskey Insurrection, in 1798, in the Fries Rebellion, and in the War of 1812, finally in 1898, during the war with Spain. It formed the escort of Washington in 1789, in 1794 and in 1798, was reviewed by him in the last-mentioned year, and formed part of his funeral pageant in 1799. It was also the escort of Adams and Wayne on several occasions, of Lafayette in 1824, and of Presidents Jackson, Van Buren, Harrison (1841), and Tyler.

The narrative is a very readable one, and contains some pleasant descriptions of scenes and incidents, as well as of the inhabitants of the country.

The Troop served at Shenandoah and at Wilkes-Barre, and the author's notes on the country and its people are interesting and instructive.

J. P. W.

Strategy. Colonel Arthur L. Wagner, Assistant Adjutant-General, U. S. Army. Kansas City, Mo.: Hudson-Kimberly Publishing Co. Pp. 55.

This small volume contains a lecture delivered by Colonel Wagner, one of our most prominent military authorities, to the Officers of the Regular Army and of the National Guard, assembled at the maneuvers at Fort Riley, Kansas, and at West Point, Kentucky, last fall.

Colonel Wagner's works on Tactics and Strategy are too well known to need any comment here; they are the official text books of the army.

His essay deals very broadly with the subject, and lays particular stress on the importance of supplies of food and ammunition, bases of supply, good lines of communication, and finally the influence of railroads and the telegraph on strategic operations.

Strategic principles and combinations are very briefly considered.

The essay is intended to give a clear idea of the meaning of *strategy*, and should serve its purpose very well.

J. P. W.

Militaer - Taschen - Lexikon. Karl Friedrich Kurz (Redacteur der "Reichswehr"). Wien: *Reichswehr.* 1903. Pp. 307.

A handy little military dictionary of modern military terms, compact and clear, containing in small compass a very large amount of information.

It has no illustrations and relates, of course, mainly to the Austrian army, but it contains much of value to all nations. Good military dictionaries are so rare that every addition to this field of literature is acceptable.

J. P. W.

America in the China Relief Expedition. Brigadier-General A. S. Daggett, U. S. Army. Kansas City, Mo.: Hudson-Kimberly Publishing Company. 1903. Pp. 267.

This work is an excellent account of the brilliant part taken by United States troops in that memorable campaign in the summer of 1900, for the relief of the beleaguered legations in Peking, China, in which the author himself took so prominent a part.

It is well illustrated with excellent maps and good photographs, and constitutes an authoritative record of the events, based on the official reports, made interesting by descriptions of scenes and incidents from personal observation and experience.

The book is well written, in clear and incisive language, and is not only a full account of the campaign so far as the United States troops are concerned, but constitutes in addition a valuable contribution to the literature of the subject.

J. P. W.

COMMANDER CHARLES E. COLAHAN.

Commander Charles E. Colahan, U. S. N., who died at Lambertville, N. J., after a long illness, was born in Pennsylvania, and entered the Naval Academy July 21, 1865, and was graduated June 4, 1869. He served in various parts of the world, and reached the grade of commander in July, 1900. His total sea service was nineteen years and six months. The funeral took place from the Naval Academy chapel, Annapolis, Md., on March 14, the interment being in the Naval cemetery. The services in the chapel were conducted by Chaplain Henry H. Clark, U. S. N. All of the officers and civilian professors attached to the Naval Academy were also in attendance, and marched in a body to the cemetery. A number of friends of the deceased commander of Annapolis attended the services at the chapel. The funeral escort from the chapel to the cemetery consisted of the brigade of midshipmen under command of Lieutenant Commander W. F. Fullam, U. S. N., headed by the Naval Academy band and a body of seamen. The pallbearers were as follows: Honorary, Commander Charles J. Badger, U.S.N., Commander William F. Halsey, U. S. N., Lieutenant Commander W. C. P. Muir, U. S. N., Professors Philip R. Alger and Nathaniel M. Terry, U. S. N., and Lieutenant W. H. G. Bullard, U. S. N.